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Carpooling Cultures: learning from University students on-the-move

Jacqueline Horton

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Abstract

Carpooling is an informal form of ridesharing which is often utilised to mitigate traffic congestion and parking demand. This thesis examines what mobilises, sustains, and limits the willingness of university students to share their cars on journeys to campus. Prompted by a decline in carpooling participation at the regional University of Wollongong campus, this project builds upon previous work at UOW to uncover motivations underpinning, and barriers limiting, carpooling amongst students. Engaging with mobilities and transport literature, this thesis offers qualitative insights into the experiences of carpooling amongst students; moving away from quantitative surveys which dominate current carpooling research. Thus, drawing upon Social Practice Theory, and concepts of affect and emotion, this study utilises a mixed-method qualitative approach through combining online semi-structured interviews with sketches, tables, and diagrams. The results presented over two chapters offer insights into two 'cultures' of carpool within the UOW student community, with distance playing a defining role in their distinction. Underpinning these 'cultures' are practices of sharing, scouting, hosting, scheduling, socialising, cleaning, and ridding. For those students residing in close proximity to campus, carpooling is just one of many transport options available. As a result, participant narratives revealed a lack of commitment to passengers, with the scheduling of a return journey from campus often non-existent. Therefore, carpooling amongst this 'culture' is often utilised to maintain a sense of control and comfort through the use of their private cars. Contrastingly, for those students travelling a further distance to campus, the labour involved in orchestrating and negotiating carpooling journeys heightens the felt emotional intensity of the journey. This coincides with ideas of public transport as 'infrequent' and a lack of supporting UOW infrastructure. The thesis concludes that carpooling practices at UOW amongst both cultures are underpinned by ideas of convenience, control, and autonomy, rather than sustainability. Arising from this are key policy implications and future research opportunities.

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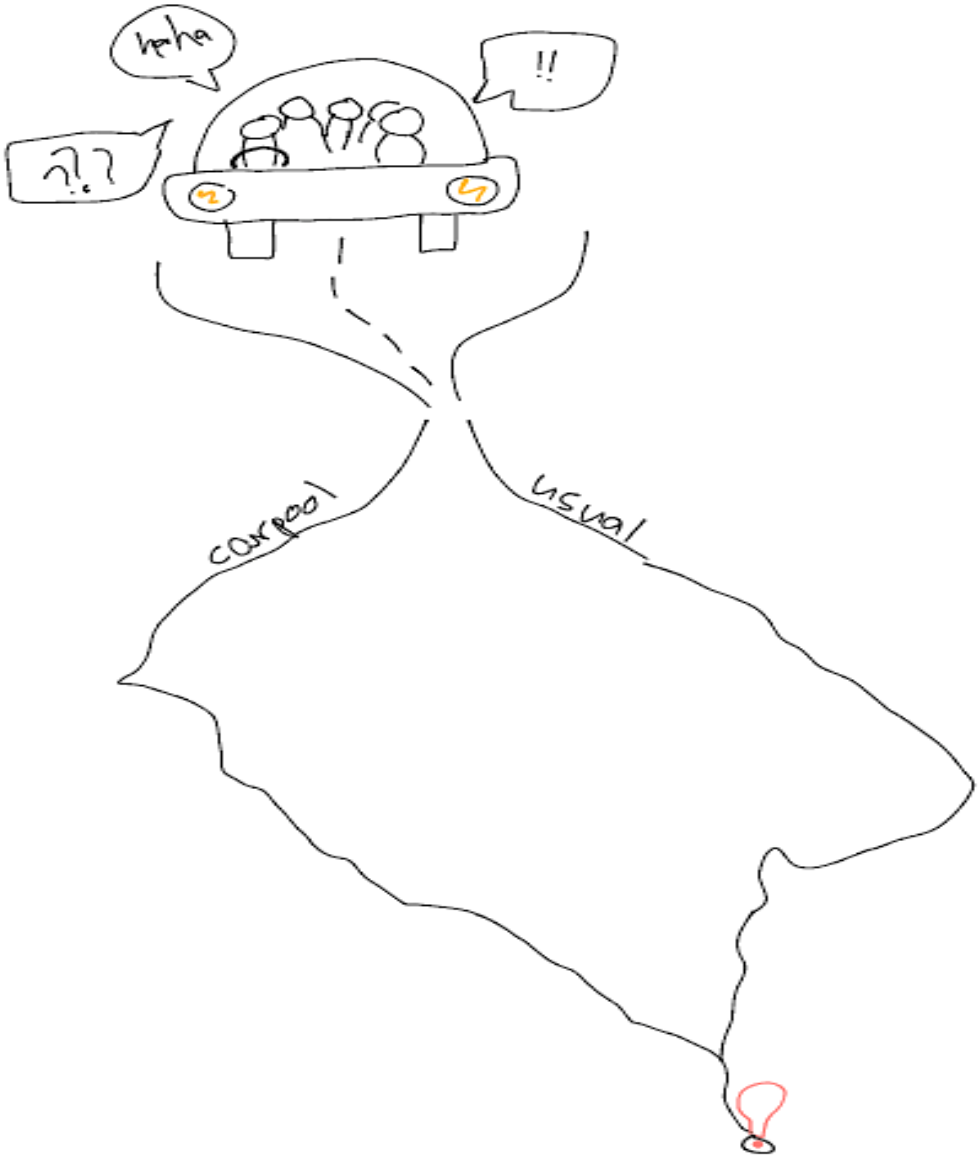

Jacqueline Horton

A thesis submitted in part fulfilment of the requirement of the Honours Degree of Bachelor of Science in the School of Geography and Sustainable Communities 2020.

Abstract

Carpooling is an informal form of ridesharing which is often utilised to mitigate traffic congestion and parking demand. This thesis examines what mobilises, sustains, and limits the willingness of university students to share their cars on journeys to campus. Prompted by a decline in carpooling participation at the regional University of Wollongong campus, this project builds upon previous work at UOW to uncover motivations underpinning, and barriers limiting, carpooling amongst students. Engaging with mobilities and transport literature, this thesis offers qualitative insights into the experiences of carpooling amongst students; moving away from quantitative surveys which dominate current carpooling research. Thus, drawing upon Social Practice Theory, and concepts of affect and emotion, this study utilises a mixed-method qualitative approach through combining online semi-structured interviews with sketches, tables, and diagrams. The results presented over two chapters offer insights into two 'cultures' of carpool within the UOW student community, with distance playing a defining role in their distinction. Underpinning these 'cultures' are practices of sharing, scouting, hosting, scheduling, socialising, cleaning, and ridding. For those students residing in close proximity to campus, carpooling is just one of many transport options available. As a result, participant narratives revealed a lack of commitment to passengers, with the scheduling of a return journey from campus often non-existent. Therefore, carpooling amongst this 'culture' is often utilised to maintain a sense of control and comfort through the use of their private cars. Contrastingly, for those students travelling a further distance to campus, the labour involved in orchestrating and negotiating carpooling journeys heightens the felt emotional intensity of the journey. This coincides with ideas of public transport as 'infrequent' and a lack of supporting UOW infrastructure. The thesis concludes that carpooling practices at UOW amongst both cultures are underpinned by ideas of convenience, control, and autonomy, rather than sustainability. Arising from this are key policy implications and future research opportunities.

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Table of Contents

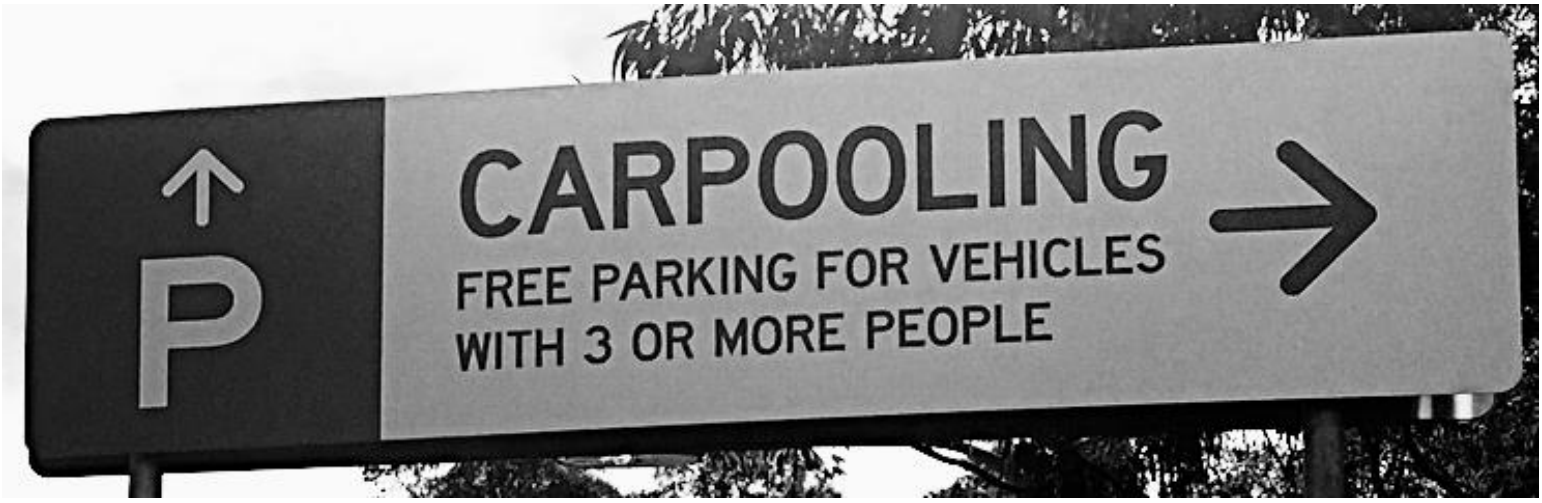
List of Figures

List of Boxes

List of Tables

Chapter 1:

Introduction



1.1. Research Impetus

Carpooling is on the lips of transport planners across western societies. In a context of climate change (Stern, 2006; Barr and Prillwitz, 2014) and rapidly urbanising populations (Lerner, 2011; Romanowska et al., 2019), governments and institutions are drawn to carpooling positioned as a sustainable transport solution. Sustainable transportation is that of positive environmental, social, and economic effects for all generations (Gudmundsson et al., 2015). Essentially, a sustainable transport system is one that meets current needs for transport and mobility without impeding upon the ability of future generations to meet their own needs (Black, 1996). Therefore, sustainable transportation is a key dimension of policies and strategies of climate change mitigation. Carpooling practices have attracted particular attention for their potential to reduce traffic congestion, carbon-dioxide emissions, and single-occupancy vehicle use (Patriksson, 2015; Chen and Kockelman, 2016). While carpooling is not new (Olsson et al., 2019), the challenge of climate change and population growth and distribution have increased the popularity of, and investment in, shared mobility.

Transportation is one of the most critical and challenging issues that university campuses face. The University of Wollongong (UOW) provides one example of the way that carpooling has been enlisted in strategies of sustainable transport. UOW provides a dedicated carpooling carpark on campus to encourage students to carpool with 2 passengers. This '3 for free' initiative comprises a two-fold response: first, it seeks to encourage less single-occupant or private car commuting to align with strategies of environmental sustainability; second, it aims to relieve the strain placed on on-campus paid parking and street parking off-campus. However, recent data gathered by the Environmental Unit, within the Facilities Management Division at UOW, indicates a significant drop in carpooling participation rates. A 2019 student transport behaviour survey reported that single-occupant driving was the most common mode of transport when commuting to campus (University of Wollongong, 2019a). However, the study also generated insights into carpooling practices as underpinned by convenience and cost-savings. Significantly, the survey reported that carpooling occurred mainly with family or close friends (University of Wollongong, 2019a).

This thesis builds on this previous research by UOW with the intention of exploring the lived dimensions of carpooling to understand what sustains and hinders students' carpooling practices. Understanding practices of carpooling by prioritising the lived experiences of commuters provides an important knowledge-base from which to develop and implement effective sustainable transport policies.

1.2. Research aims and objectives

The research aim is to better understand why university students are willing, or not, to share their cars on journeys to campus. To do so, the project conceptualises carpooling practice as configured by ideas, materials, and bodily skills (Shove et al. 2010), alongside affects and emotions (Sheller, 2004; Kent, 2015).

This thesis will respond to three research questions:

1. What sustains the practice of carpooling?
2. What limits the practice of carpooling? i.e., when does the practice of carpooling fall apart?
3. What can we learn about conducting research online in response to a global pandemic?

This chapter sets out the project context through the subsequent four sections: systems of automobility; environmental implications of car dependence; the UOW response; and student transport options at UOW.

1.3. Systems of Automobility

Australia remains a car-dependent nation. As a result of sprawling geography and high per-capita income, Australia has one of the highest rates of vehicle ownership in the world (Moran et al. 2016). Thus, private motor vehicles dominate transport behaviours. In 2020, there were 19.8 million registered motor vehicles in Australia (Australian Bureau of Statistics, 2020). Currently, there are 576 passenger cars per 1000 Australians (ABS, 2020). Importantly, since 2015 passenger vehicle numbers in Australia increased by 8.3 per cent . Crucial to this car dependency, particularly in small cities, are low levels of public and active transport participation (Toole, 2011). Publicly available statistics are usually based on mode of transport to work. In the small city of Wollongong, in which this present study is set, the 2016 census revealed that 71.2 per cent of residents commuted to work via the private car, with just 7.5 per cent utilising public transport, and 3.6 percent walking or biking (ABS, 2016).

High dependence on car mobility is sustained by how automobility reconfigured lives and geography. The car contributed to increasingly spatially fragmented lives (Shove, 2003; Sheller, 2004; Urry, 2004). However, simultaneously, the car was pitched by manufacturers as the solution, fashioned in terms of reliability, flexibility, convenience, and autonomy (Sheller, 2004; Urry, 2004). Car mobility is understood as enabling individuals to save and control time in overcoming friction of distance. The perceived benefits of the car (being fast, convenient, and comfortable) position public and active transport options as comparatively slow, inconvenient, inflexible, and uncomfortable (Urry, 2004). As a result, attempts to address car dependence are often minimally successful, despite widespread acknowledgement of the environmental implications of driving.

1.4. Environmental Implications of Car Dependency

Car mobility is an unsustainable practice, with private car dependence significantly contributing to the climate change problem (Waitt and Harada, 2012). Therefore, the direct carbon emissions associated with car use are of great concern. Emissions from the transport sector contributed to 18.9 per cent of Australia's 530.8 million tonnes of carbon dioxide equivalent (CO2-e) emissions; with light vehicles accounting for the largest share (Commonwealth of Australia, 2019; Climate Council, 2020). This positions transport as the third largest contributor to total Australian emissions (Australian Government, 2017). Importantly, transport emissions have increased more than any other sector, with a 60 per cent increase since 1995 (Australian Government, 2017). Therefore, emissions reduction from car use is a priority in transport and mobility policy (Waitt and Harada, 2012).

Within current mobilities discourse, a central discussion around a transition towards a lower CO2 future underpins ideas of sustainability in the transportation sector. Mitigating measures, in the form of sustainable transport, are positioned as more crucial in light of the predicted increase in demand for mobility (Nikolaeva et al., 2019). However, car dependence poses many challenges to policymakers at all levels of government. Despite research noting high levels of public understanding and concern regarding climate change, behavioural responses to this do not reflect a decrease in private car ownership or use (Waitt and Harada, 2012).

Arguably, car dependence is naturalised in Australia. Private car use is supported by government regulations, road infrastructure and investments, as well the centralisation of the private car in transport and urban planning, and social norms (Godwin, 2010). However, there is evidence of sustainable transport options gaining traction, with rates of car ownership amongst younger generations decreasing (see section 2.3 and notions of 'peak car'), alongside practices of carsharing and carpooling becoming increasingly popularised (see: Goodwin, 2010; Dowling and Simpson, 2013; Kent and Dowling, 2013; Shaheen & Cohen, 2018; Shaheen et al. 2018). These suggest that cracks in the logic of automobility are appearing.

1.5. The University Response

What could be more natural than driving to university? Indeed, up to the 2000s most students would be both car owners and commuters. Driving to campus was taken for granted. However, climate change, alongside the sector's embrace of the United Nations Sustainable Development Goals resulted in the establishment of 'Environmental Units' that embrace sustainable transport modes at higher education establishments (Hancock and Nuttman, 2014). UOW is no exception to this (University of Wollongong, 2020). The transition of university students to transport modes positioned as more sustainable like carpooling, is just one example of wider reconsideration in Western society around fossil-fuel mobility (see: Nikolaeva et al. 2019; Shaheen et al. 2018; Dowling and Kent, 2013).

At UOW, driving by car remains the most popular way to arrive on campus. Importantly, UOW notes a modal shift amongst students and staff, noting a 30% decrease in private car commuting since 2007 (University of Wollongong, 2019b). However, data from the 2019 *Jump on Board* study notes approximately 46% of participating students chose the car as their preferred transport mode (University of Wollongong, 2019a). In addition, parking on campus at UOW is a scarce resource, with approximately one third of participating students stating they utilised off-campus parking (University of Wollongong, 2019a). Hence, carpooling is one response by UOW towards a more sustainable future aiming to further decrease private car commuting to campus. UOW is not alone in this strategy. Many municipal authorities and organisations globally, advocate for carpooling to reduce cars number on the road and demands for parking (Infrastructure Australia, 2019; Shaheen et al. 2018). At UOW, carpooling has involved the economic incentive of free parking to increase the modal ability to save money, time, and space. Yet, as stated in section 1.1., data gathered by the UOW Environmental Unit suggests a noticeable drop in student carpooling rates. This context underscores the importance of understanding transport options available to UOW students, which are explored in the following section.

1.6. Transport Options

Crucial to understanding transport infrastructures at UOW are the transport options available for student journeys to campus. For students within the Wollongong LGA, a range of public and active transport options are available. These include, free city shuttle buses whose service runs every 10 minutes around central Wollongong, including stops at all UOW student accommodation residences. Additionally, UOW provides free University shuttles which connect the main North Wollongong train station to the UOW Wollongong Campus (see figure 1.1). There are also active transport options for students, with footpaths and bike lanes available throughout the CBD. However, an increase in additional infrastructure and improvements to the existing paths are required to enable greater uptake of active modes of commuting (University of Wollongong, 2019b).

For students outside of the Wollongong LGA, options to commute to campus become increasingly limited, or limiting. Paid buses with direct routes to the Wollongong Campus are available from areas such as Dapto, Figtree, Shellharbour, Austinmer, Bulli, and Campbelltown on a limited timetable (University of Wollongong, n.d. A). Similarly, trains that run from Sydney and Greater Sydney through to the South Coast, towards Nowra, service longer-distance commuting UOW students (Transport NSW, n.d.). However, the infrequency and monetary and time costs of these services are often deterrents. Therefore, carpooling by UOW is positioned as an alternative “for people who don't have easy access to public transport or where it is not realistic to walk or cycle” (University of Wollongong, n.d. B).

Recognising the growing interest in carpooling among universities and larger organisations, including UOW, this research project seeks to further understand carpooling culture. To do so, this project utilises a mix-methods approach, incorporating online semi-structured interviews and interview activities (as explored in Chapter 3). Therefore, in order to enhance understanding this thesis takes the concept of social practice within the mobilities literature and applies it to carpooling

Figure 1.1: Route Map of free bus shuttles to Wollongong UOW campus.

Source: *University of Wollongong, n.d. A*

1.7. Thesis Structure

The research aims are addressed across the five remaining chapters of the thesis.

Chapter 2 brings together existing literature on automobility and notions of 'peak car' alongside the findings of current carpooling research. The chapter concludes by drawing upon mobilities research and the conceptual lenses which guide mobilities scholars in embodied and affective research on movement. From this, a social practice framework is provided that guides the analysis of empirical data.

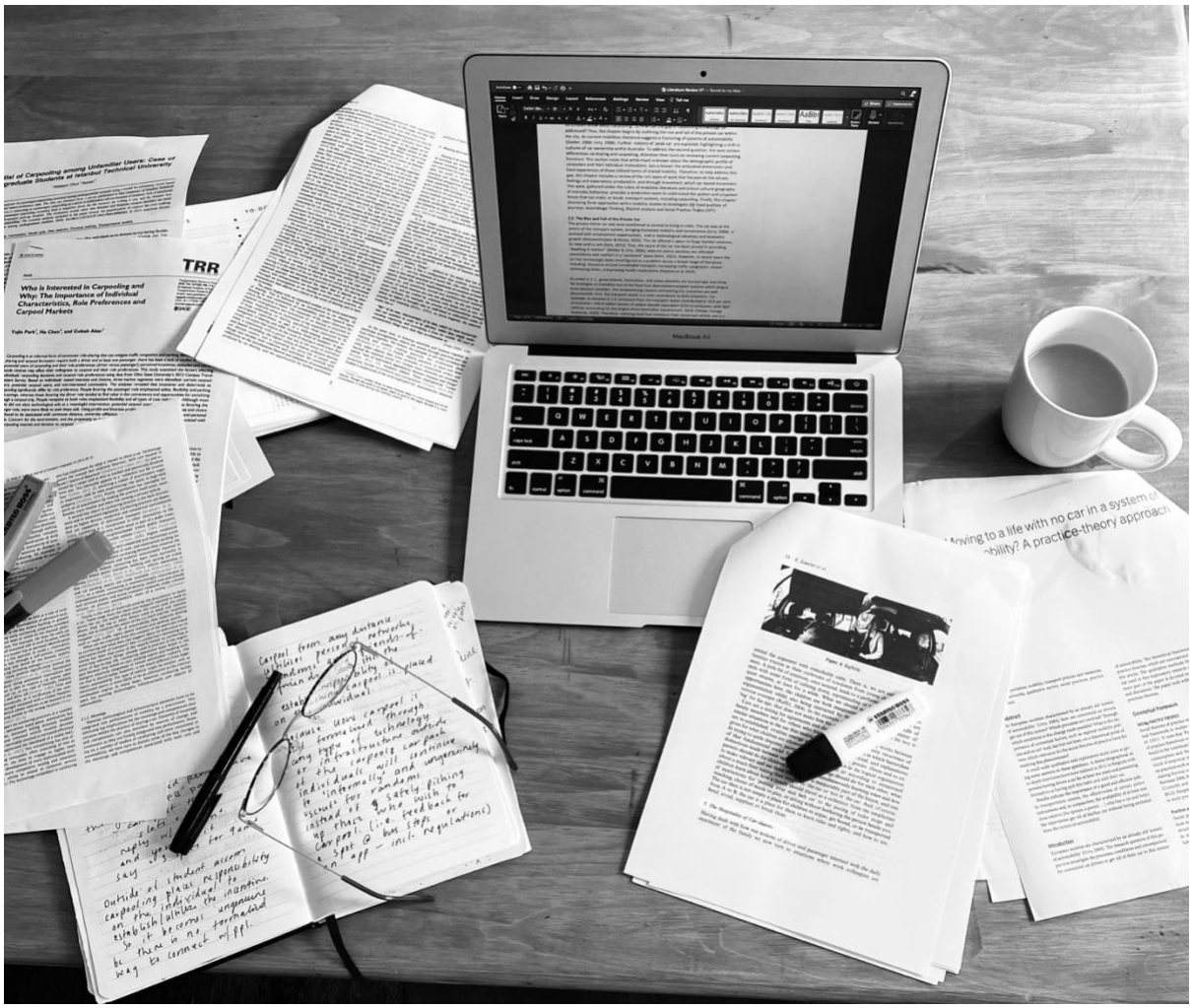
Chapter 3 outlines and evaluates the research methods and seeks to answer the third research question (see section 1.2.) through discussion on, and evaluation of, the online qualitative methodology.

The analysis of data are presented across two chapters. Through data analysis, distance of commute emerged as crucial to understand difference between carpooling practices. Therefore, chapter 4 examines the practices underpinning carpooling amongst students who reside within the Wollongong LGA (within 5km of the university campus). While chapter 5 explores carpooling amongst students who reside 20km or more from the Wollongong UOW campus. These chapters focus on the similarities and differences in practices of scheduling, socialising, hosting, and the social norms attached to car cohabitation between these two carpooling 'cultures'.

Finally, to conclude the thesis, Chapter 6 addresses the project aims and provides key findings. The chapter sets out key policy implications regarding the infrastructure underpinning carpooling at UOW and suggests future research directions.

Chapter 2:

Literature Review



2.1. Introduction

This chapter aims to answer four important questions: 1) Why do people carpool?; 2) What do scholars know about carpooling?; 3) Within current carpooling literature, are there any gaps in knowledge?; and 4) What conceptual frameworks provide insight to the experience of carpooling? Firstly, the chapter begins by outlining the rise and fall of the private car within the city, and what mobilities scholars refer to as the 'fracturing' of systems of automobility (Sheller, 2004; Urry, 2004). Further, notions of 'peak car' are explored, highlighting a shift in cultures of car ownership within Australia. Subsequently, to address the first two questions, the chapter defines and differentiates between carsharing and carpooling. It then reviews current carpooling literature within the social sciences. In answer to the third question, through the review of current research, it is noted that much is known about the demographic profile of carpoolers and their individual motivations, but less is known on the embodied dimensions and lived experiences of their shared mobility. Therefore, to address this gap in the literature, the chapter reviews the rich seam of work within mobilities literature and critical geography on everyday behaviour. Focusing predominately on theories of practice to understand mobility behaviour, choice, and pattern. Thus, in answer to the fourth question, this chapter provides an outline of the conceptual framework utilised in this project. This framework is the combination of the materials, meanings, skills, and the affects and emotions underpinning mobility behaviour and choices, as conceptualised by Shove et al. (2012) and advocated by Sheller (2004) and Kent (2015).

2.2. The Rise and Fall of the Private Car

The private motor car was once positioned as pivotal to living in cities. The car was at the centre of the transport system, bringing increased mobility and convenience (Urry, 2004). It assisted with employment opportunities, and in technological advances and economic growth (Nieuwenhuijsen & Khreis, 2016). The car offered a space to forge familial relations, to relax and to talk (Kent, 2015). Thus, the car was pivotal in providing 'dwelling in motion' (Sheller & Urry, 2006), wherein entire societies are afforded convenience and comfort in a 'cocooned' space (Kent, 2015). However, in recent years the car has been reconfigured as a problem across a broad range of literature, including discourse around sustainable transport, traffic congestion, commuting times, and health (Hopkins et al 2019).

As noted in 1.1., governments, institutions, and urban planners are increasingly searching for strategies to transition out of the fossil fuel-dominated transport systems which plague most western societies. The underpinning reasons for this transition are well documented. First, the transport sector is a main contributor to Greenhouse Gas emissions (see section 1.4). Therefore, reducing fossil fuel emissions from motorised vehicle use is a transport policy priority. Secondly, The World Health Organisation (WHO) identified car dependency as a significant contributor to increasing sedentary lifestyles (WHO, 1999). Well documented throughout current mobilities and health literature, are direct links between car use and greater physical inactivity (Shoham et al. 2015; Chakrabarti and Shin, 2017; Wen et al.

2008). In turn, this leads to heightened trends in obesity in western societies specifically (Wen et al., 2006; Wen et al., 2008). Third, congestion in cities is attributed to the disproportionate growth of road traffic compared to road capacity (Ochieng & Jama, 2015). In Australia, road performance is increasingly deteriorating, with the average speed of travel, and reliability or predictability of travel time both declining. The three largest capital cities (Melbourne, Brisbane, and Sydney) reported a fall of 3.5-8 per cent in average speed between 2013 and 2018 (Australian Automobile Association, 2018). Further, residents in outer suburbs of cities are trapped in travel-time budgets beyond their desirable limit (Newman et al., 2013). This impacts on commuter stress. A 2011 global survey indicated that city drivers across the world are becoming increasingly more anxious and unsettled in their commutes; a trend that is expected to continue (Ochieng & Jama, 2015).

Car dependent transport systems are defined as "one in which high levels of car use have become a key satisfier of human needs" (Mattioli et al, 2020:2). Mobilities literature examines this notion of the car being a private space that allows for a more satisfying and convenience daily routine (Sheller, 2004; Urry, 2004; Kent, 2015). Often cars are highly valued as a "personal security pod" (Wells and Xenias, 2015:107) or a "cocoon" (Green et al. 2018: 16); providing occupants a space which shields the body from others, and from the physical environment outside the car's interior (Kent, 2015). Further, the car is denoted as the "easier way" to move as it requires less expenditure of physical energy than negotiating public transport (Kent, 2015: 738). Public transport is thus positioned as "just one more thing" to burden an already stress-filled modern life (Kent, 2015:738). Therefore, the transition away from the dependence on the private car is often challenged by the ease, convenience and privacy offered by car itself (Waitt and Harada, 2012). While individuals are implored to consider the health, environmental and economic benefits provided by public and active modes of transport, there is still a wider promotion and maintenance of the private car in planning and policy (Nikolaeva et al, 2019).

Transport transition policies are centred around scarcity. When notions of scarcity are foregrounded within neoliberal notions of efficiency, competition and individualism, the problem becomes one of a lack of space, time, money, and oil (Nikolaeva et al. 2019). Furthermore, neoliberal policy priorities favour individual behaviour change (Gössling & Cohen, 2014; Schwanen et al., 2011). The responsibility of maintaining efficiency, is placed on individual behaviour to ration resources that save time, money, and the environment. Therefore, in order to transition out of the culture and infrastructural "lock-in" that sustains high-carbon mobilities (Urry, 2009) greater emphasis on the governing structures, rather than the actions of individuals to move towards sustainable modes of transport, is needed (Nikolaeva et al. 2019).

2.3. 'Peak Car' Discourse

The 'peak car' hypothesis is an integral part of mobility transition in western cities. Since the 1950s the car has been both a symbolic and real expression of individual autonomy to travel independently (Cresswell, 2010). However, 'traditional' cultures of automobility do not necessarily ring true for younger generations (Hopkins et al 2019). 'Peak car' is explained at the intersection of multiple changes including technology advances, economic cycles, and aspirations (Wells & Xenias, 2015). These technological advancements are related to smartphones and applications, wherein matching systems are available at the touch of a fingertip and can provide transportation to individuals within minutes, as seen in commercial car share services within cities such as Uber and GoGet (Shaheen and Cohen, 2018; Dowling et al. 2018; Dowling and Simpson, 2013).

In addition, economic cycles and conditions are an important factor influencing a decline in car ownership amongst younger people (Goodwin, 2010; Hopkins et al. 2019). For example, many younger adults often emerge from education in debt, or with limited income, or be forced into undesired living conditions, such as large share houses or returning to the parental home (Wells & Xenias, 2015). The financial burden of car ownership is untenable. Further, Green et al. (2018) argue that the cultural status of the car has undergone significant changes amongst younger generations. For Generation Z (2000), and the tail end of the Millennial Generation (1980-2000), car ownership is not equated with the 'good life' (Sheller and Urry, 2000; Green et al., 2018). Consequently, in Australia, fewer younger people are buying new cars. Since 2007, while new car purchases from those aged 65 years and older has increased in the same period those aged 18-19 declined (Ray Morgan, 2015). Furthermore, there is a noticeable drop in obtaining licences, with a 6.2 per cent drop for men since 2012 (Wilkins & Lass, 2018) and an emerging market in shared-car mobilities.

2.4. Car sharing/pooling: similarities and differences

Ridesharing is the collective term for carpooling and carsharing. In this thesis, carsharing is understood as underpinned by commercial relations. Commercial carsharing is categorised as ride-sourcing (Shaheen & Cohen, 2018). Examples include car share, such as Go Get, and share rides, such as Uber and Lyft wherein system matching software is used (Shaheen et al., 2016). Whereas carpooling relies on private car ownership and is understood as shaped by the informal and casual rather than commercial relations (Shaheen & Cohen, 2018). This thesis employs the term carpooling to mean: the sharing of car journeys with one or more passengers that all travel in one car to a shared destination.

2.5. Current Carpooling Literature

Carpooling research has so far focused on city centre commuters deemed 'casual carpoolers', those in paid work and university students. Attention is given to differing platforms utilised to orchestrate carpooling journeys. These include peer-to-peer social-network-based systems, word of mouth, family

carpools, and application-based matching systems (Shaheen and Cohen, 2018; Kaplowitz and Slabosky, 2018; Tezcan, 2016). From the pool of current carpooling literature, this section explores three key aspects: 1) the motives underpinning carpooling participation; 2) the university experience of carpooling; and 3) the gaps in current research

2.5.1. Carpooling Motives

Shaheen et al. (2018) position carpooling as an option for more environmentally conscious travel while still maintaining the convenience of the car. Questions surrounding motives for carpooling participation are therefore important in creating a successful carpooling strategy or system in response to the demand for sustainable mobility. Carpooling literature speaks to participation as underpinned by environmental concern and ideas of limiting individual emissions (Park et al. 2018; Shaheen et al. 2018). However, these environmental concerns are tied up in individual contexts, wherein a range of factors influence modal choice, such as accessibility, demographics, and understandings or values of time, flexibility, and responsibilities. Moreover, the degree in which environmental concern impacts participation has been debated across many carpooling studies (Olsson et al. 2019). Thus, while carpooling is positioned as a more sustainable transportation mode, ideas of sustainability may not be highly influential on individual participation.

Within current carpooling research, there are a multitude of studies which focus on socio-economic characteristics (incomes, age, and gender) and judgmental factors (convenience, attitudes, and privacy) (Olsson et al. 2019). Further, a portion of literature narrowly focuses on the effect of pricing and congestion on the propensity for one to carpool (Olsson et al. 2019; Tahmasseby, Kattan & Barbour, 2016). Another key focus of research are the impacts of pick-up location distance, and whether individuals are willing to pay for the cost of carpooling and what factors influence the level of willingness (Kaplowitz & Slabosky, 2018; Friman et al. 2020). Tezcan (2015) notes that the willingness to pay a fee for travel decreased as the pick-up location move further away from the individual's origin. Additionally, Park et al. (2018) found that the length of commute is important in modal choice, with a shorter commute time underpinning greater willingness to participate in carpooling. Further, the financial benefits of carpooling (in terms of reduced travel costs) were found to be a statistically significant explanatory variable amongst carpooling-passengers in comparison to carpooling-drivers (Park et al. 2018).

Safety is a key topic identified in current carpooling literature. Safety barriers are suggested to be highly impactful on one's propensity to participate in carpooling, particularly when travelling with strangers (Olsson et al. 2019). In most carpooling studies propensity to participate in carpooling is statistically associated with knowing the people sharing the journey. Travelling with a known person is reported as a significant positive impact on participation (Olsson et al, 2019). These concerns for safety are often

gendered with women reporting higher rates of mistrust and unwillingness to carpool with strangers (Gallo & Buonocore, 2017).

Current literature suggests that carpooling can be successful only if it appeals to time, space, and economical savings. Convenience is understood as a predicting variable of modal choice (Tahmasseby, Kattan, Barbour, 2016). In terms of economic savings, the economics of carpooling of those in paid work is the conventional research focus. Further, economic barriers to carpooling are a key focus of previous research. For example, current studies indicate that when the monthly carpooling expense surpasses 10% of monthly income, almost no users prefer to carpool, especially young students with tight budgets (Tezcan, 2015). Additionally, when income increases, individuals draw away from public transport and towards the private vehicle (Tezcan, 2015).

Another area of interest lies within an understanding of how the practice of driving is connect with other practices such as work, socialising, and parenting (Kent, 2015). Outside of work by Laurier et al. (2008), there is limited understanding of the organisation of car travel focusing on how individuals travel together and the effects on social units. The practice of driving is found to be linked to other practices in interdependent and complex ways (Watson, 2012; Kent, 2015). Therefore, for carpooling to be successful, the interconnected practices outside of mobility must remain served and convenient by the modal choice (Kent, 2015). For example, Frieman and colleagues in 2020 explore how participants perceive the possibility and ability, of undertaking their daily activities, and how that influences transport mode choice.

A meta-analysis conducted by Olsson et al. (2019) and in contrast to the findings of the UOW 2019 *Jump on Board* study, concluded that carpooling participation was not significantly driven by environmental concerns, but rather a desire to socialise. Similarly, another recent study by Malichova et al. (2020) further suggest that positively loaded motives, such as socialising effect carpooling participation. This draws attention towards how values of time, money, the environmental, as well as the social values that echo within everyday lives and habits, can directly impact believed accessibility or feasibility of transport options (Friman et al. 2020).

2.5.2. The University Experience of Commuting

University students must often juggle complex personal schedules alongside complex commuting practices (Shannon et al. 2006). Additionally, university students regarding their commuting practices, form a unique group of commuting individuals, as they generally undertake higher trip rates, with greater diversity in daily activities compared to standard households (Eom et al. 2009; Tezcan, 2015). Therefore, there are two key findings from previous studies which are central to this thesis. First, alternative modes of transport to private cars are often more highly used amongst university students

than the general population (Zhou, 2012). For students, the car is an expensive option in comparison to public transport travelling in mostly 'off-peak' hours with public transport concessions. However, this is contingent upon public and active transport availability, and often decreases amongst students who reside further from university campus (Shannon et al. 2006). Secondly, students tend to use more than one mode of transport to travel to university campus throughout a typical week, depending on private schedules (Zhou, 2012; Romanowska et al. 2019). For students, the private car, while providing convenience, is not necessarily the preferred mode of transportation to campus and must be understood as one of many possible options.

2.5.3. Gaps in Carpooling Research

Critically, the majority of current transport studies on carpooling rely primarily upon survey-based approaches to better understand who carpools and the key variables that sustain the practice. These studies draw on humanistic behavioural style approaches. They also deploy similar key questions which focus on the impact of known or unknown persons on one's propensity to carpool, and whether inclinations change based on ideas of punctuality, reliability, matching schedules, and the sharing of monetary costs (Shaheen et al., 2018).

A handful of quantitative studies with university students examine their willingness and inclination towards carpooling. Empirical survey data is often restricted to 'yes' and 'no' responses or Stated Preference Statistics. Results of these surveys are contested in terms of motivations. However, the majority of these studies report that monetary and environmental values are key to understanding why students carpool (Kaplowitz & Slabosky, 2018; Gallo & Buonocore, 2017; Tezcan 2015). Overlooked are the embodied experiences and practices of carpooling. Similarly, missing from current literature is the exploration of how practices of sharing influence carpooling participation, especially for carpooling drivers. That said, there is a plethora of literature within mobilities studies that relate to the embodied experiences of private car use (as explored in section 2.6), alongside studies which focus on "commoning mobility" (Nikolaeva et al, 2018). Hence, carpooling is an interesting practice as it has the potential to transform the private and intimate space of the car (Sheller, 2004; Kent, 2015; Green et al. 2018) into a shared, quasi-public space.

2.6. Conceptual Frameworks in Mobilities

There have been three dominant conceptual framings to better understand the experiences of mobility. These are: Assemblage Thinking, Rhythm-analysis, and Social Practice Theory (SPT). This thesis follows, and builds upon, SPT. This is a result of the emergent themes from the empirical data, which spoke more strongly to the conceptualisation of SPT. The additional two conceptual frameworks are discussed in more detail in Appendix A.

2.6.1. Affect and Emotion in Mobility

In 2004, Mimi Sheller called for research that understood driving as embodied. She argued that emotions are important in explaining why people drive, alongside understandings of themselves and the world (Sheller, 2004). Emotions are felt through the body but are elicited, evoked, and managed in relation to settings and affective cultures. Affective cultures refers to societal 'feeling rules' in which emotions are governed and defined by expectations of what should and shouldn't be felt and the circumstances in which said feelings are acceptable (Hochschild, 2003). Therefore, emotions play a key role in embodied experiences of the car as they act as a way of sorting the non-cognitive sensations which occur through movement of the body (Sheller, 2004; Kent, 2015; Waitt et al. 2017; Waitt and Harada, 2012). The embodied dimensions of the car are essential and entrenched in the ways that we inhabit, negotiate, and interact with the physical world (Sheller, 2004; Urry, 2004). Therefore, to conceptualise the embodied dimensions of driving, scholars draw different conceptual frameworks. In what follows, Social Practice Theory, as the conceptual framework guiding this research, is explored in which understandings of affect and emotion are incorporated.

2.6.2. Practices in the Everyday

How can everyday, habitual behaviour be changed? Social Practice Theory (SPT) aims to explore this question, having emerged from scholarship seeking to better intervene in environmental policy. SPT as discussed by Shove et al (2012) is one theoretical lens that enables behaviour to be conceptualised as a more-than-human achievement. This concept challenges humanistic behavioural approaches that focus on the individual. Instead, social practice theories understand behaviour as human actions in which individuals participate in, rather than create or decide upon (Strengers & Maller, 2011). Therefore, SPT aims to understand routine human action as a product of collective social influences, explicitly recognising that individual practices in the everyday are interconnected and reinformed through the social (Hitchings, 2011). The social is conceived through shared understandings, norms, meanings, and purposes (Reckwitz, 2002; Shove et al. 2012). SPT is widely applied in geographies of household sustainability, including practices such as daily showering (see Shove and Walker, 2010), fast-food consumption (see Cummins and Macintyre, 2006), sedentary lifestyles (see Shibata et al. 2009), and the use of air-conditioning (see Strengers and Maller, 2011). Further, and more recently, Kent and Dowling (2013) explored practices of carsharing through the conceptual lens of SPT as conceived by Shove et al. (2012).

SPT is a theory of process. It seeks to explain practice through the events in which the process of practice unfolds (Reckwitz, 2002; Shove et al. 2012). For Shove et al (2012) practice is therefore conceived at the intersection of three concepts: meanings, materials, and bodily competencies. According to Shove et al (2012) meanings encapsulate "symbolic meanings, ideas and aspirations" (pp.14). This can refer to important social norms of cars, driving, bus timetables, and transport options,

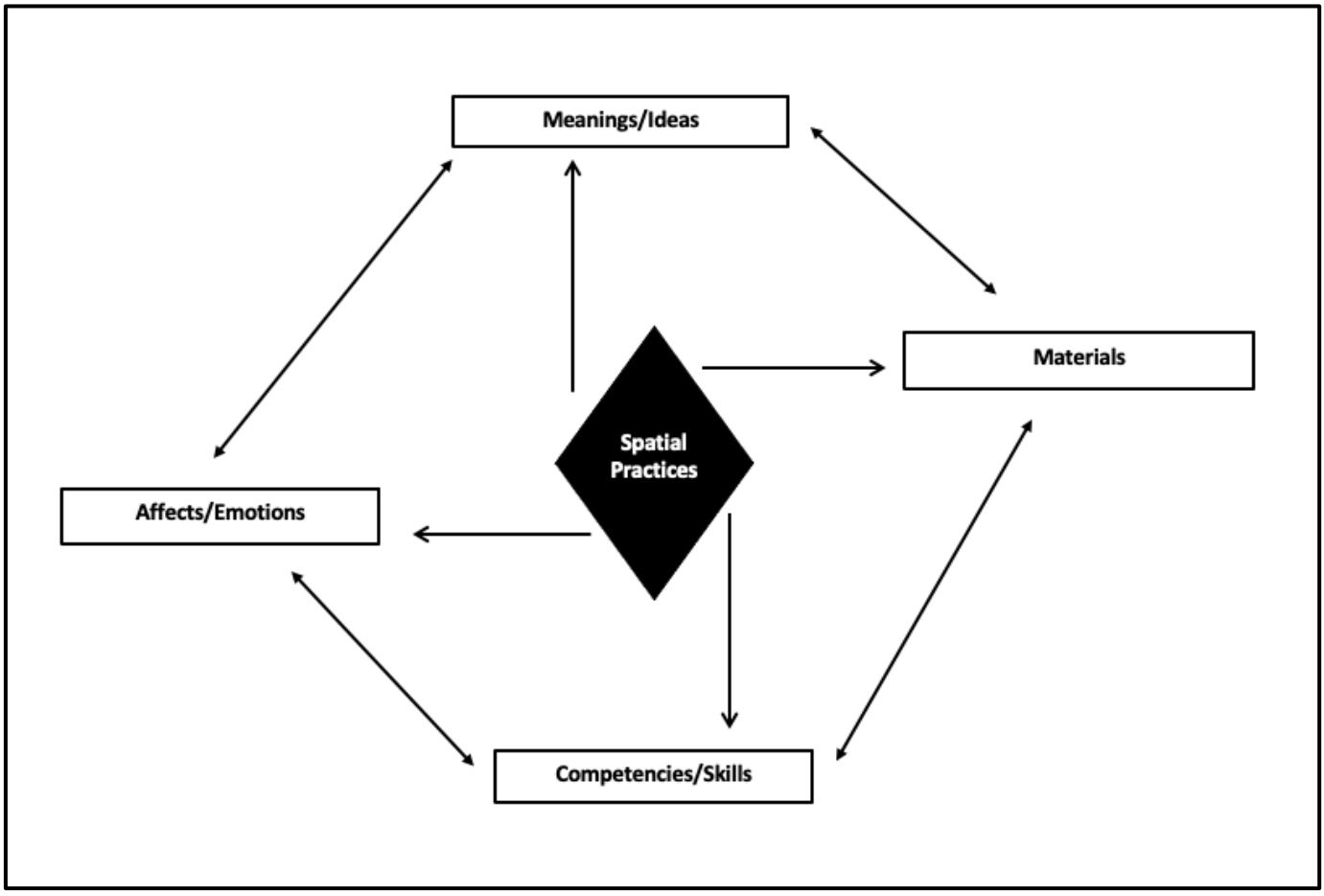
as well as ideas about riding in a bus, versus a private car, versus walking. All of these 'meanings' are influential in mobility choices and thus influence individual willingness to participate in carpooling, in varying degrees. Materials in SPT are conceptualised as including "things, technologies, tangible physical entities and the stuff of which objects are made" (pp.9). In the context of carpooling, materials include engines, cars, car parks, petrol, doors, wheels, paths, roads, bus stops, smart phones, GPS, as well as the design of the car's interior. The materiality of these aspects enable the functioning of carpooling journeys and connections. For example, carpooling cultures are heavily dependent on smart phones for communication and thus are crucial to carpooling arrangements. Finally, competencies refer to "skill, know-how and technique" (pp.14). Bodily competencies involved in practices of carpooling including driving, parking, handling traffic, navigating roads, texting and conversational tasks and skills, such as hosting passengers. Practices are continually reproduced and reinvented at the intersection between these three concepts.

Following Kent (2015), the conceptual framework advanced in this thesis to better understand carpooling incorporates a fourth concept, that of emotion (see figure 2.1). According to Kent (2015), rich understandings of what motivates practices can be revealed through the exploration of feelings. Earlier practice theorists, such as Reckwitz (2002), consider why feelings may sustain and create ways of doing and being within modern life. Practices can be informed and determined by what one feels, including the way we live and interact. Additionally, the way we live and interact in practice can sometimes be determined by how and what we feel (Thrift, 2000). Therefore, SPT should consider this in its approach to understanding practices (Kent, 2015). As established in mobility studies, the emotions of driving are important in enabling parenting, working, and socialising (Waitt and Harada, 2012; Kent, 2015; Waitt and Harada, 2016). Moreover, the emotions sustained by driving help make the space of the car both private and intimate (Sheller, 2004). Further, the decisions to drive is a practice of routine that is sustained by the interconnected elements of social norms and car culture, alongside feelings and emotions attached to private car use as a form of daily mobility (Sheller, 2004; Wiatt and Harada, 2012; Kent, 2015). Therefore, Kent (2015), explored the role of the body in sustaining automobility through an examination of how feelings and emotions are interconnected with practice, and how the practice of driving is connected to one's outer responsibilities such as employment and parenting.

These insights highlight that understanding car and road system infrastructure futures must encompass the social, material, and embodied context of transport choices. Thus, the inclusion of emotion and feeling as an element in practice allows the consideration of the role feelings play in changing and sustaining practices (Kent, 2015). This, in turn, can allow for problematic practices to be altered or challenged. Through work on the experience of car mobility by academics such as Sheller (2004), Kent (2015) alongside Waitt and Harada (2012; 2016), an understanding of the underpinning factors sustaining automobility become apparent. These include friendships and relationships; family networks

and responsibilities; individual daily routine; as well as feelings of comfort, freedom, and flexibility. It is through emotions that we can open up discourse regarding mobility choices, and how ideas of sustainability may fit into those choices and practices.

Figure 2.1. Diagrammatic representation of the Conceptual Framework



2.7. Conclusion

This chapter aimed to provide and outline existing literature on automobility and car dependence, carpooling participation, and conceptualisations of mobility that have informed this project. Four questions were posed in 2.1. which underpinned this chapter.

Firstly, why do people carpool? As examined, current literature suggests a plethora of reasons behind carpooling participation. These included environmental concerns related to individual emissions, pricing and monetary savings, traffic congestion and aspects of socialising. Intricately tied to this is the second question: what do scholars know about carpooling? This chapter highlighted that practices of ridesharing, including carpooling, are positioned as more environmentally conscious travel which maintains the conveniences and comforts of the private car. Importantly, current research on carpooling note multiple distinct platforms through which carpooling journeys can be organised. These include,

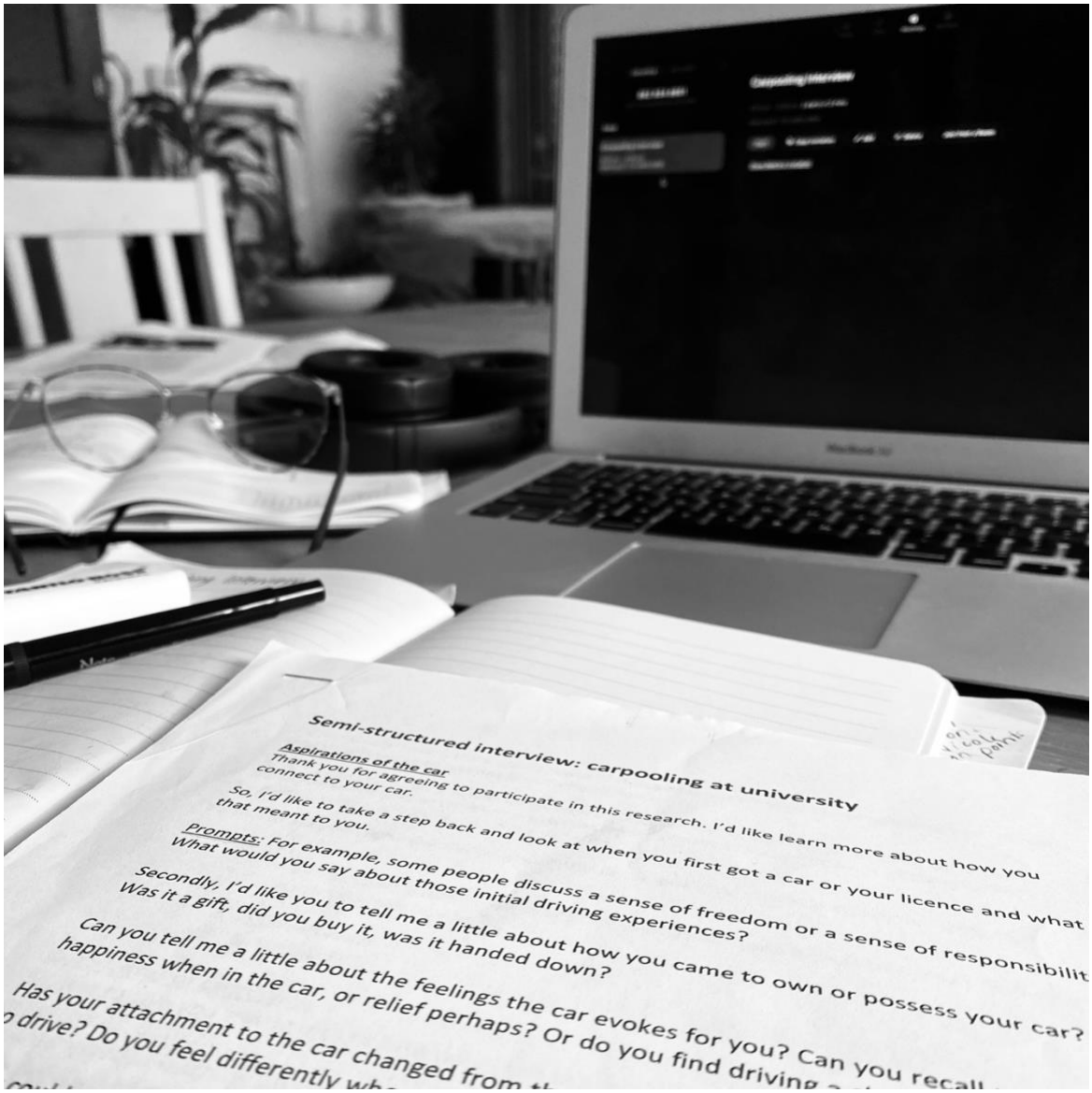
word of mouth, or family and friend pools, as well as, peer-to-peer social-network-based systems, and application-based matching systems. Further, current research examines carpooling participation in multiple contexts, such as amongst low and high income groups, including across differing age categories and ethnicities, and between those in paid-work and in the context of university students. In examining carpooling amongst university students, current literature also explores the complexity of commuting behaviour amongst students, with carpooling positioned as one of many transport options.

This leads into the third question: within current carpooling literature, are there any gaps in knowledge? Evident within this chapter were existing gaps in current literature. These related to the methodologies of current research. As examined majority of carpooling research draws upon humanist behavioural approaches, mainly utilising quantitative surveys, with few qualitative expectations amongst carpoolers in paid-work (Shaheen and Cohen, 2016). Missing from carpooling research are the embodied and lived experiences of carpooling participation, specifically within the university context. As a result of engagement with mobilities literature, this project aims to address this gap through the implementation of a qualitative mixed-method study that explicitly engages with the lived dimensions of university students and carpooling participation. To do so, this chapter engaged with a fourth question: what conceptual frameworks provide insight to the experience of carpooling? Drawing upon Social Practice Theory, and incorporating concepts of affect and emotion, allows for the carpooling practices of university students to be unpacked. Thus, carpooling can be explained through a bundle of underpinning practices, highlighting limitations to, and desires of, participation amongst students.

As evident, this chapter sets the scene for the methodological discussion and empirical data analysis which unfold in the subsequent chapters. The framework and methodology deployed in this project sought to engage with the lived experiences of UOW carpoolers. How this was achieved is discussed in the following chapter.

Chapter 3:

Methodology



3.1. Introduction

The aim of this chapter is to outline and evaluate the methodological choices deployed in this project. With the 2020 global pandemic preventing face-to-face research, 'mobile methods' could not be utilised in better comprehending the embodied dimensions of carpooling, as advocated by Büscher et al. (2010), Merriman (2014), and Harada and Waitt (2012). In light of this, the project design was carefully re-framed to utilise mixed-qualitative methods via an online platform, remaining alive to the carpooling practices and experiences of students on-the-move.

To achieve its aim, this chapter is structured into 5 sections. This includes an evaluation of the recruitment process, the project design, the implications of conducting qualitative research online, and the analysis process. To begin, the chapter discusses the ethical considerations, and the concept of positionality in negotiating potential harms and benefits of this research.

3.2. Ethical considerations

Research ethics refers to a set of principles that guide researcher conduct and ensure the key responsibilities of the researcher to their participants are upheld (Dowling, 2010). Human Geography research is largely informed by principles of social justice, underpinned by an ethical commitment to sustainability, representation, and equity (Barnett, 2014). Despite this wider ethical commitment, geography does not have a code of ethics (Hay, 1998). Yet, there are both formal and informal ethical codes at play in Human Geography research. This section discusses the ethical considerations, highlighting the various formal and informal ethical strategies employed in this project.

3.2.1. Formal Ethical Strategies

Formal ethical strategies included an ethics application submission to the University of Wollongong Human Research Ethics Committee (HREC), who are directed by the *National Statement on Ethical Conduct in Human Research*. Through this process, the HREC's aims are to assure that the research benefits outweigh the possible risks. As the project design involved gathering personal empirics on everyday carpooling mobility, HREC ensured the project design would maintain privacy, confidentiality, informed consent, and mitigate possible risks associated with conducting research during a global pandemic. Approval from the HREC was received 28th April 2020 (HREC ref. 2020/155—see Appendix B).

To address the ethical considerations, multiple strategies were utilised:

i) *Informed Consent*

Informed consent is underpinned by two important aspects; firstly, the participant must be completely aware of what their involvement in the research requires; secondly, consent to participate must be voluntarily given (Dowling, 2010). Each participant received a 'Participant Information Sheet' (PIS)

which outlined the project's purpose, data collection methods, how the data would be used, as well as the participant's rights (see Appendix C). The PIS was given to each participant before consenting to participate. Those interested in participating, signed a written consent form before the commencement of data collection (see Appendix D). Consent was verbally (re)confirmed, and participants were informed before the recording of the online interview commenced, to ensure they were comfortable and willing to proceed.

ii) *Privacy and Confidentiality*

Due to the restriction of face-to-face research, all contact with participants occurred through email or through social media platforms (specifically Facebook during the recruitment phase). Working on online platforms, to conduct and record interviews, imposed unique considerations. Zoom was utilised for all interviews because it offers the secure recording and storing of interviews without the use of third-party software (Archibald et al. 2019). All participant information and research data was securely stored on a password protected network, only accessible to the principal researchers. To further maintain confidentiality, participants were given the option of a pseudonym being used in published data related to this project. All participants elected to, and these choices are adhered to in the preparation of this thesis.

iii) *Burden of time and care in research in the context of a global pandemic*

It is important to reiterate that this research occurred during the COVID-19 global pandemic. Therefore, care in research was of upmost importance. While carpooling is a seemingly mundane topic area, the virus itself, alongside the social-distancing and 'lockdown' measures implemented throughout the course of this project, created widespread uncertainty and anxiety. Therefore, there was a need to remain alive to potential heightened stress levels, and the possibility that the free time available to participate may have arisen from under- or un- employment. Ensuring flexibility with interview dates and times, as well as creating the option for participants to complete interview activities before or during the interview itself, or opting to not complete them at all, kept the burden of time to a minimum.

3.2.2. Informal Ethical Strategies: Reflexivity, Positionality & Rigour

Engagement in ethical behaviour must go beyond receiving ethics committee approval (Dowling, 2010). Therefore, a feminist 'ethics of care' guided ethical considerations within this project. A feminist ethics of care encourages ongoing reflexivity alongside formal codes. Feminist scholars suggest that if ethics is treated as merely an institutional issue, it could compromise the responsibility of thinking ethically on a continual basis (Valentine, 2005). Hence, Reeves (2007:257) argues that there is a need for a researcher to "adopt a reflexive attitude and to be able to resolve conflicts and dilemmas which may occur at any stage of the research process". Therefore, ethics is an ongoing and relational process

which requires constant reflexivity to prevent harm, rather than following a prescriptive set of regulations (Popke, 2006).

The concept of positionality is central to this. Positionality is employed to help think through how research generates a space, shaped by both the social and embodied histories of researcher and participant (England, 1994). Therefore, through recognition of our positionality as researchers, insights are gained into how research settings and engagement with participants might be better approached (Bourke, 2014). As noted by Bailey et al. (1999), any piece of qualitative research is influenced by the researcher's positionality, defined in terms of perspectives, attributes, and self-understanding. To remain alive to this, a personal research diary was kept by the researcher to allow ongoing reflexivity on how one is embedded in the 'field' of research (England, 1994). It was utilised to document the qualities of, and changes in, the relationship with the research. Within this project, remaining alive to the researcher's own transport behaviours, ideals of sustainability, and relationship to the participants, was also significant. This is reflected in the diary extract presented in Box 3.1, wherein the researcher's initial positionality is explored.

Further, discussions of positionality often lead to evaluations of how rigour or trustworthiness is established in qualitative research (Maher et al. 2018). Within this qualitative project, rigour is understood following four criteria for evaluation: credibility, transferability, dependability, and confirmability (Baxter & Eyles, 1997). See Appendix E for how rigour was achieved in this project.

Box 3.1 Researcher Positionality Statement

Initial thoughts

This project explores aspects that are within my own experiences of university commuting. As a current student at the University of Wollongong, I have had an array of experiences with different transport choices. I've always been close to free public transport to campus; I've lived in student accommodation, where I was able to connect to and practice carpooling quite easily; I've lived in share houses were there were enough of us to make the carpooling numbers; I've been picked up at bus stops to help someone get carpool; I've jumped into a friend's car with other friends to travel 3 minutes to uni, so parking would be easier for them.

During my years at university, my desire and need to carpool (as the driver) has decreased based on the convenience and location of public transport afford to me. Importantly, having my own car at university has not necessarily been possible. Influencing factors such as the expense of parking at uni, and also the availability of parking spaces on campus, means that it's much easier to catch public transport and arrive directly on campus. My commute to campus via public transport reaches a max of 15 minutes (on a bad day).

Importantly, throughout the years at university, I have come to understand the commuting experiences of those outside the Wollongong area. Knowing that I have the luxury of hopping on a free bus which takes 10-15 mins to reach my stop, a stop that is less than 500m from my house, is a wildly different experience to those who are outside the free bus loop, and outside of Wollongong itself.

Reflecting on my transport choices to university, also requires me to reflect on my use of the car outside of travelling to campus to attend class. While it's rare for me to drive to university (outside of first year on student accommodation), I will still always drive to work and drive to the grocery store. At the start of this year, I moved further into the city centre, and so I now drive to the beach to enjoy a nicer walking route. This all occurs despite the availability of public transport to all these locations. The preference for the car, it's convenience and comfort of being "right there", impacts my transport decisions.

3.3. Method of Recruitment and Sample Summary

Recruitment required thinking through multiple strategies. Three potential recruitment strategies were:

1. Contacts from the 2019 *Jump on Board* transport behaviour survey
2. Social platforms
3. Personal Networks

Initial recruitment occurred through an earlier UOW *Jump on Board* project conducted in 2019. The Jump on Board survey was designed in collaboration between the School of Geography and Sustainable Communities and Environmental Unit. After completing a questionnaire survey on transport options to UOW, participants could opt to be contacted for participation in future research. Approximately 65 people agreed to be contacted again. An email invitation was sent to these individuals (see Appendix F for the email script sent to participants). This initial invitation received no replies. A secondary, shorter, and more personal invitation was sent to approximately 40 of these 65 participants, of whom had identified themselves through the survey. However, only participant was recruited through this method.

As a result of the main recruitment method being insufficient in engaging participants, the recruitment approach was re-considered. The researcher turned to the use of social media and personal networks. Social media platforms, mainly Facebook and Twitter, were utilised through postings on larger student-based pages such as student societies platforms (see Appendix G for media script). Simultaneously, the researcher utilised contacts within her personal networks who were known to carpool from different areas, within and outside of the Illawarra. A snowballing recruitment strategy was deployed through this network, with participants enlisting fellow carpoolers to participate. Through these two recruitment strategies, the final number of participants increased from 1 to 14.

Figure 3.1 illustrates key demographic attributes of participants. Thirteen participants (93%) were aged between 21-24. Only one participant was aged in their 40s and lived with her children as a single parent. Additionally, by place of residence, eight participants lived in the Wollongong LGA, three resided in Campbelltown Area (St Helen's Park and Minto), one in Thirlmere (just outside of Picton), one in Heathcote, and one in Shellharbour (see Appendix H for a map of participant postcodes). Nine lived in share houses, while the remaining 4 resided in their parental home. All participants were full time students at UOW, either having graduated at the end of 2019 or were currently still studying.

Importantly, all participants were female. This is a potential reflection of the recruitment methods utilised. Through the use of social media and personal networks to engage with potential participants, the researcher recruited many students known to her. However, this could equally be a reflection on willingness to participate in research, wherein women are often more likely to partake in studies (Smith, 2008; Mulder and de Bruijne, 2019). Nonetheless, this project solely reflects the female perspective of carpooling practices at UOW.

3.4. Project Design

3.4.1. Qualitative Mixed-methods in a Global Pandemic

A two-stage project was initially designed involving a semi-structured interview, video diary, and follow up interview. As stated in section 3.1., the project had to be carefully reconfigured due to restrictions placed on face-to-face research. Therefore, this research moved from engaging in 'mobile methods', to conducting a single interview via an online platform with each participant. This posed the question: How do you engage with the non-conscious, non-verbal, and embodied dimensions of carpooling when conducting research online? The sections that follow justify the methodological choices, while simultaneously highlighting the implications of conducting qualitative research online. First discussing the use of semi-structured interviews, including a justification for the inclusion of interview activities to engage the non-conscious dimensions of mobility. Then moving into an evaluation of the design of the interview schedule.

Table 3.1: Summary of Participant Attributes

Participant	Y.O.B	Postcode & Suburb	Commute time to UOW	Living situation	Occupation	Study stage at UOW at time of interview
Gemma	1999	2233	30-45 min drive	Parental home	Full time student, part time work	Completed degree end of 2019. (completing masters in Sydney)
Penny	1998	2572	45 mins drive	Parental home	Full time student, part time work	Completed degree end of 2019 (completing masters in Sydney)
Hazel	1997	2500	3 min drive 10 min walk	Share house	Full time student (international studies), part time work	Currently studying
Hailey	1996	2500	3 min drive 10 min walk	Share house	Full time student (sustainable communities), part time work	Currently studying
Eleanor	1998	2560	55-minute drive	Share house	Full time student (social science), part time work	Currently studying
Margie	1996	2500	10 min drive	Share house	Full time work	Completed degree end of 2019
Bethany	1999	2560	40-65 mins	Parental home	Full time student (education), part time work	Currently studying
Rachel	1997	2500	5 min drive 20 min walk	Share house	Full time student (Social work), part time work	Currently studying
Jessica	1978	2500	45 min incl. dropping off children 15 mins driving directly	Single parent household	Full time student, part time work	Currently studying
Lucy	1996	2500	10 min drive or less	Share house	Part time work	Completed degree end of 2019
Elizabeth	1996	2500	5-10 mins	Share house	Full time student (Psychology), part time work	Currently studying
Ophelia	1998	2528	20-30 minutes	Parental home	Full time (social science), part time work	Currently studying
Claire	1997	2500	10 min drive	Share house	Full time work	Completed degree end of 2019
Caroline	1996	2560	~ 1 hour drive	Share house	Full time work	Completed degree end of 2019

3.4.2. Combining Semi-structured Interviews with Interview Activities

Semi-structured interviews are a popular qualitative research tool in human geography (Dowling et al., 2016). Importantly, Dunn (2010:101) explains that "interviewing in geography is more than 'having a chat'". Rather, semi-structured interviews are understood as useful in capturing participants' experiences, opinions, and practices (Pink, 2008). Further, the appeal of this method is that the interview is organised around "ordered but flexible questioning" (Dunn, 2010:110). Hence, this method facilitates the co-production of knowledge, by allowing participants to tell their personal narrative as the path of conversation between the researcher and participant is not confided or stilted by a rigid set of questions. Further, semi-structured interviews provide a wealth of 'thick' or 'rich' evidence of participant's lived experiences (Herod, 1993). Thus, moving beyond simple yes/no responses through the sharing of stories, experiences, connections, and challenges (Dunn, 2010).

In the absence of face-to-face methods, the use of semi-structured interview to access the non-conscious dimensions of everyday mobility took on particular importance. Dewsbury (2010:325) stated that "a well-conceived set of interview questions might well be far more effective at capturing the tensions of the performing body". Therefore, attention was turned to crafting a structure of questions that aimed to access emotions and experiences linked to carpooling practice. Alongside carefully worded questions, the semi-structured interview included activities such as sketches, tables of typical weekly transport choices, rating scales of important/influential factors, and schedule clocks (See Appendix I for interview schedule; Appendix J for interview activities). These activities were combined with the semi-structured interview because there are aspects of experiences that cannot be expressed by participants verbally within an interview setting. For instance, sketches have long been acknowledged as complementary to semi-structured interviews to access meanings, emotions and affects. These methods are a form of 'live methods' which allow individuals to express the richness of their lived experiences (Back and Puwar, 2012). By incorporating these activities into the semi-structured interview, it affords the participant the opportunity to guide the conversation and frame their own experiences (Kearney and Hyle, 2004).

All besides one participant completed the activities. Due to the interviews being conducted online, participants had the option to complete the activities before or during the interview. As a result of this, some participants found it easier, and perhaps more comfortable, to talk through what they would draw, or indicate in the tables, rather than physically drawing or completing the activity during the interview. Therefore, the activities were used as a talking tool, stimulating greater reflection and depth of explanation to the sensory dimensions of carpooling, including smell, touch, and sight.

3.4.3. The Interview Schedule

To generate narratives about individual driving and carpooling practices, the structure of the interview schedule was informed by current literature on the materiality of the car, emotions of car mobility (see Kent, 2015; Green et al. 2018; Sheller 2004), and previous studies that explored influences on participation in carpooling (see section 2.5). The interview activities, served to stimulate reflection on, and generate verbal response of, the embodied and affective attributes of carpooling. The semi-structured interviews lasted between 30 minutes to 1 hour, on average, and occurred following the 5 key sections detailed below.

i) Aspirations linked to the car

This section first asked questions around participants initial experiences obtaining their drivers licence, owning their first car, and the aspirations linked to car mobility as a teenager/young adult. Informed by mobilities literature on the affective embodied consequences of the car (Kent, 2015; Sheller, 2004) and the cultural norms of automobility (Edensor, 2004), questions then turned to changes in aspirations of car mobility. This involved exploring how participants would negotiate daily life without a car in both the short, and long term. Engaging in this discussion around the significance of the car to daily mobility provided insights into the meanings attached to the car, and the coordination of commuting considering available transport options and their perceived feasibility or accessibility.

ii) The commute to university

With an understanding that the car is often conceptualised in western societies as a more efficient and convenient way of commuting (Featherstone et al. 2004; Shove, 2003), and that the daily schedules and commuting practices of university students can be complex (Shannon et al. 2006), the aim of this section was two-fold. The first aim was to explore the temporal dimensions of participants' commutes to UOW campus and the transport options available in their residential area. Secondly, through the use of the daily transport choice table, participants engaged in narratives around transport preferences, both realistically and ideally. This highlighted the limitations and benefits of the ways in which they commute to university. As a result, broader discussion on how their transport choices during a typical university week were influenced by responsibilities such as work commitments, extracurricular activities, and familial obligations (i.e., returning to their hometowns), and how driving their own cars (either when carpooling or driving alone) facilitated greater temporal efficiency.

Finally, in this section, participants were asked to sketch their commute to campus. Some participant sketches became a justification of why they carpool regularly. Others sketched the limitations of carpooling when compared to other transport options as reflected in the sketch

provided by Bethany (see figure 3.2.), which demonstrates difference in the commute based on whether the journey was shared with others or experienced alone. Or Penny, who illustrated how carpooling occurred during her journey from her home to university (see figure 3.3.).

Figure 3.2: Bethany's commuting sketch

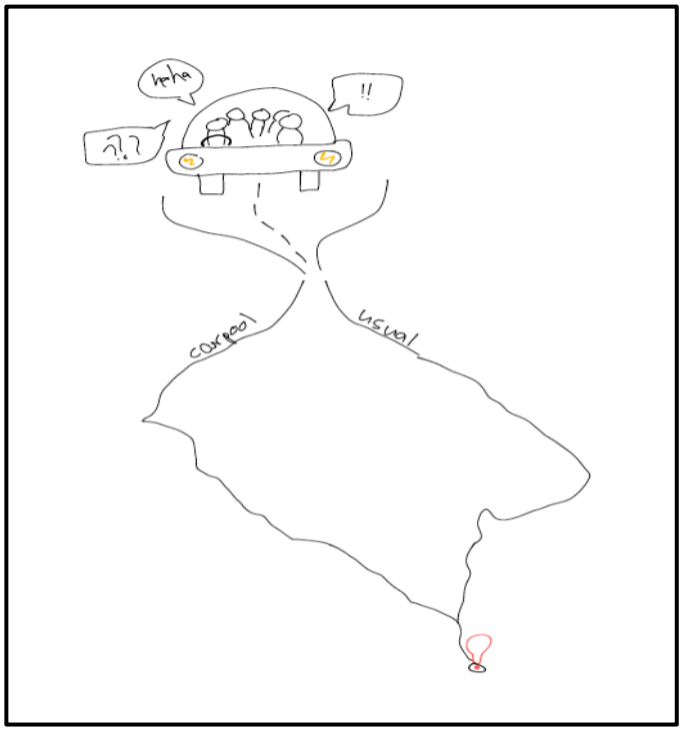


Figure 3.3: Penny's commuting sketch

iii) Why you carpool

The aim of this section was to explore the reasons why participants engaged in carpooling when commuting to campus. This section first asked participants to discuss their initial reflections on the main reasons why they chose to share their own cars when carpooling. Taking on the advice for qualitative research interviewing, by enriching data through prompts (Jacob & Furgerson, 2012), participants were then asked to rate the significance of 5 key influential reasons, as identified by the current literature on carpooling (explored in section 2.5. of lit review). These reasons included: sustainability, convenience, finance, comfort, and socialising. This activity enabled each participant to talk through how each factor related to their experience and identify and express important meanings. Participants expressed that having to give each factor a rating, allowed for deeper reflection on what influences their choice to participate in carpooling. Therefore, while participants were asked to express the reasons they carpooled before the activity was introduced, it stimulated greater reflection on their transport decisions of sustainability, finance, comfort, convenience, and socialising.

Finally, in this section, participants were asked to explore how carpooling fit within their daily schedules through a 'clock' activity. Inspired by David Bissell's work around bodies and everyday commuting, where one participant provided David with a hand-drawn diagram (Bissell, 2013a). This diagram demonstrated that outside of sleep and work, her journey to and from work was the most time-consuming activity within her daily routine. Drawing on this, participants were asked to illustrate, on the 24-hour clock, how a typical university day played out. In practice, this activity created confusion amongst participants. This confusion stemmed from the irregularity between university days and the requirement for participants to reflect upon previous experiences of commuting. However, with deeper explanation of the activity, participants could identify and illustrate, within blocks of times, their typical university day which included activities such as attending university classes or study, commuting times, work shifts, socialising, and general life habits such as eating and sleeping. While there was varying detail in these illustrations between participants (see figure 3.4 and 3.5), the discussion that accompanied this activity explored how carpooling to university either enabled or hindered experiences of efficiency and productivity.

Figure 3.4: Bethany's 'typical day' sketch

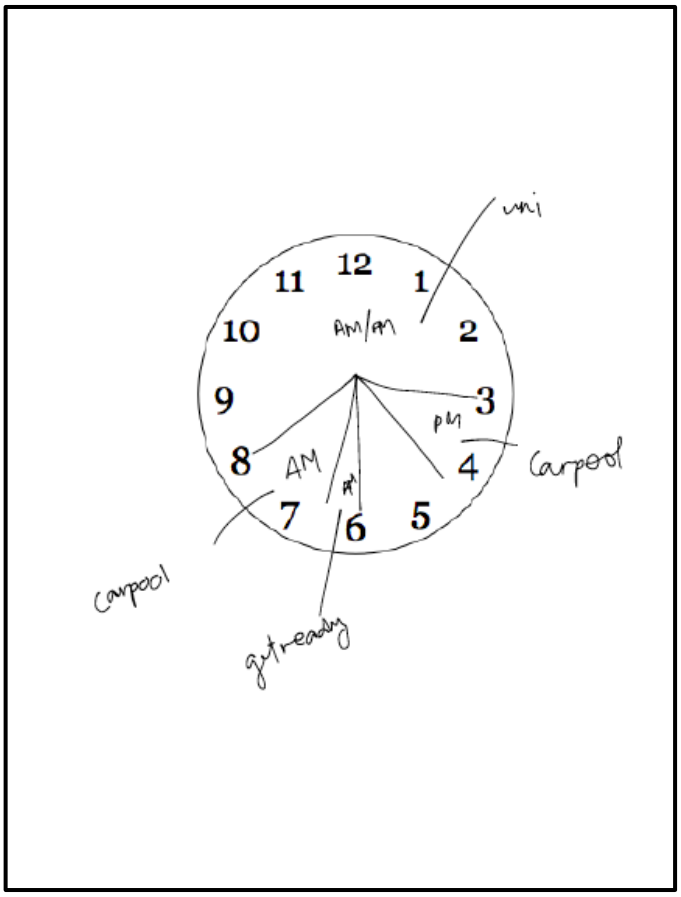
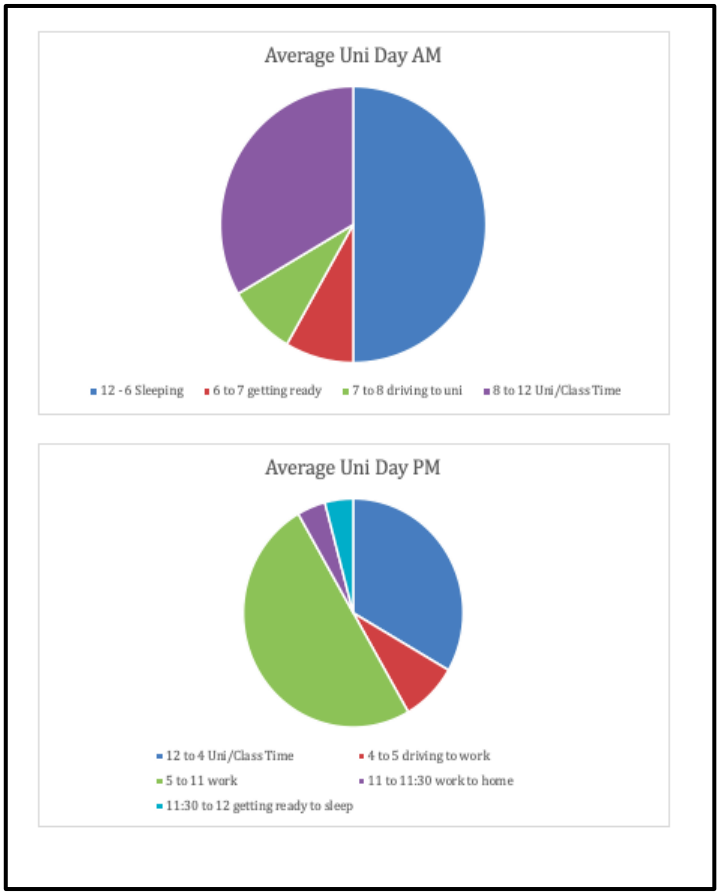


Figure 3.5: Claire's 'typical day' sketch



iv) *Experiences of carpooling*

The car interior is often experienced as a private and intimate space (Kent, 2015; Sheller 2004). Therefore, the aim of this section was two-fold: firstly, to understand whether participants viewed or experienced their own car in this way; secondly, to explore why, and with who, they chose to share this space with. To facilitate these conversations, participants were asked to sketch what carpooling means to them. For those participants who drew, either as they were explaining or before the interview, they included things such as dollar signs, smiling faces, and speech bubbles (see figure 3.6 and 3.7 below). The accompanying explanation provided a justification of the 'simplistic' drawing. The sketches helped participants to express the emotions evoked during carpooling journeys.

Figure 3.6: Caroline's carpooling sketch

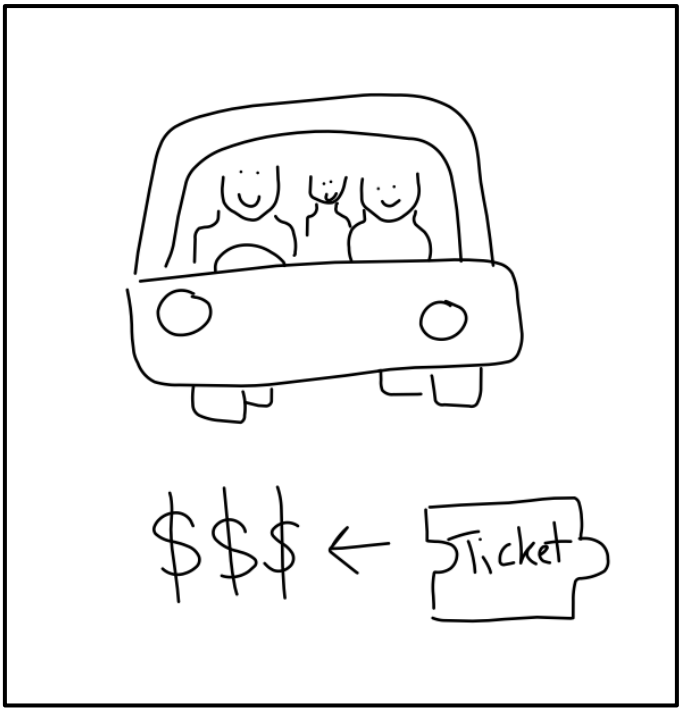
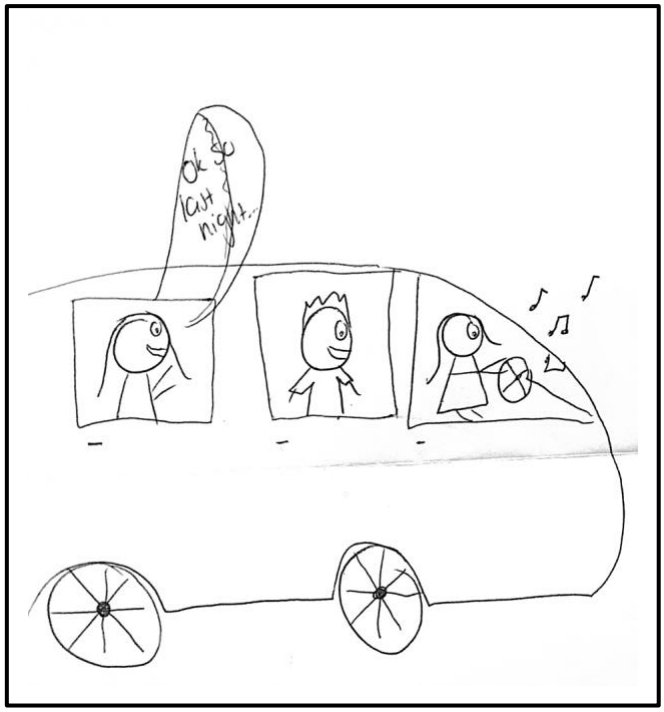


Figure 3.7: Ophelia's carpooling sketch



Following the sketch activity, participants were invited to reflect on their bodies within the car's interior and explore what hinders or facilitates the process of sharing. It is known that mobile bodies have the capacity to affect or be affected when in proximity to fellow commuters (Bissell, 2013b). Further, an emerging body of mobility literature emphasises how bodily senses facilitate comfort in the car (Kaufman, 2000; Sheller, 2004; Waitt and Harada, 2012). Therefore, this section engaged in questions around senses, namely smell and touch (in the form of personal space and touching bodies), the sharing of conversation (Laurier et al. 2008), music (Bull, 2004; Waitt et al. 2017), and monetary aspects, such as fuel. Following this exploration, participants were then asked to reflect on what carpooling allowed them to achieve, having already explored connections, intimacy,

meanings, and practices in previous sections. It was here that participants could sum up its importance in the grand scheme of their daily lives and university experience, which are explored in the subsequent chapters.

v) Insights into carpooling at UOW

The interview's final section served as a platform for participants to reflect on the aspects of carpooling explored within the interview and discuss any insights that might have been overlooked. Participants were also invited to share any suggestions for the UOW carpooling system. These insights are explored in section 6.4 of the thesis.

3.5. Online Platforms

All interviews occurred on the online platform Zoom. Online interviews are well-established in geography. Like all interviews they are contingent upon the establishment of a safe and comfortable environment for participants to share their personal narratives (Lo Iacono et al., 2016). Mindful that all knowledge is co-produced through social and material relationships (Katz, 1994), the online interview produces a specific type of knowledge. This begs an important question: what implications arise for research when bodies are present on screens rather than face-to-face? From this project three key implications are discussed: 1) building rapport; 2) maintaining the rhythms of oral communication; and 3) bodily communications.

3.5.1. Building rapport and trust

Building rapport in interviews online, poses different challenges than when in a face-to-face context. Several challenges are explored by current literature, such as a lack of visual cues, time lags and creating a conducive environment (O'Connor & Madge, 2016). In the context of this project, rapport was sustained during the interview as majority of the participants were known and had a personal relationship to the researcher. For those participants unknown to the researcher, all besides one shared a personal connection of some kind, either because they were a friend-of-friend or because they had known the researcher through undergraduate study. Therefore, the often 'awkward' beginnings were avoided by introducing those connections to build rapport and familiarity before conducting the interview.

Other techniques used in the interview to sustain rapport and stimulate conversation involved signposting. 'Introductory' sections proceeded each set of new questions. For example, when explanation was given surrounding questions such as those about one's senses, particularly the questions on smells, participants expressed they felt less confused by the line of questioning. The introductions gave participants a chance to reflect on those embodied experiences. Participants expressed in feedback following the interviews that these insights allowed them to gain a deeper

understanding of the project itself and reflect on their connection to the car in a way they might not have before.

Importantly, establishing rapport can be an issue both in online and face-to-face interviewing, when the participant is more reserved or less responsive (Deakin and Wakefield, 2014). Therefore, throughout this project, one participant was more reserved. While the researcher deployed techniques to facilitate greater engagement, the participant's responses remained closed-off. This is where the personal research diary became a space to reflect to understand the situation. For example, the following excerpt (presented in Box 3.2.) illustrates the silences and tensions generated in an interview when the project aim may not align with a participant objective.

Box 3.2. Interview Reflections

Monday June 1st: reflection on interview 9

A super short interview today. Her context was important and unique; however, I was unable to get her to engage in more detailed answers. From the first question she was unsure of its relevance, despite providing insight into the background of the question to make her feel more comfortable, there was still a sense of unease present. Reflecting on previous interviews, knowing that this participant was completely unknown to me with a larger age gap between us, there was a difference in my comfort and ease in attempting to open the conversation up. While her responses were still valuable, there was minimal detail, with conversation often being directed back to what carpooling allows her to achieve in her routine and parental responsibilities, and her suggestions for improvements to the UOW carpooling system. Knowing that establishing and maintaining rapport within interviews is a contingent achievement, and that despite best efforts sometimes it falls flat. I found that in the conversation with today's participant before conducting the interview, she stressed the importance of being able to park in the carpool carpark in order to achieve her responsibilities as both a parent and a university student. So perhaps she came into the interview with the objective of utilising the platform to raise her concerns or feedback on how certain contexts should be considered within the UOW carpooling system.

3.5.2. Maintaining the rhythms of oral communication

As most individuals were familiar with the use of online platforms due to the pandemic, conducting the interviews online was well received. Disruption created by technological difficulties including poor internet connection and lagging were forgiven. In instances where the connection was particularly poor, the researcher discussed with the participant the option to turn off video streaming to help with audio clarity. Further, if the interview was halted for a few moments, the conversation continued to flow afterwards. Humour was important to prevent disruptions from becoming a source of frustration. The disruptions created by technology was taken-for-granted as the 'new normal', as reflected in Box 3.3.

3.5.3. Bodily Communications

Online platforms allow for non-verbal cues to be communicated through facial gestures, tone of voice and patterns of speech (Hesse-Bieber and Griffin, 2012). During the interviews, while bodies were separated by distance and a computer screen, participants, and the researcher herself, still exhibited the same gestures as one would expect in conversation; particularly hand movements during explanation. With only the upper body/from the chest upwards visible during interviews, tone of voice and patterns of speech became even more important in the online setting in order to ensure information or sincerity was not lost through the computer screen. Careful consideration was given to the way questions were asked, and, for most participants, the researcher focused on mitigating confusion or pressure when prompting for more detail.

Box 3.3. Disrupted conversation

Participant: um, I mean for the most part yeah it is really enjoyable for me I just like um,

[Recording cut out due to internet]

Interviewer: Oop, we're back [laughs]

Participant: Oop are you back? [laughs]

Interviewer: oh golly, this is very interesting [laughs]

Participant: [laughs]

Interviewer: hopefully, hopefully it stays for a bit longer this time [laughs]

Participant: [laughs] okay what, what did you get up cause I'll like go back

3.6. Data Analysis

The process of analysis and the analytical coding of obtained data was not treated as a separate or disconnected research stage, but rather occurred during all project stages. As noted by Pink (2015:143), analysis should be thought as "a way of knowing", wherein engagement with theoretical thought continuously shapes or is re-shaped by the research process. Therefore, through researcher reflexivity, engagement with theoretical thought underpinned the entirety of this project. The conceptual lenses through which mobility can be understood (outlined in section 2.6 and Appendix A) guided the analysis that combined analytical coding with coding along emergent themes.

Analysis occurred during data collection, through de-briefing and reflection within the personal research diary and with research supervisors. This helped to identify initial emerging themes and ideas between participant narratives. That said, there is a messiness to analysis. Far from following a linear

pathway, analysis is much more reiterative. This reiterative process opens up and closes down particular interpretations. While the analysis was guided by the processes outlined below, the analysis occurred through multiple iterations, even before all data was collected and interviews transcribed.

Analytical analysis of the transcripts occurred through a Social Practice Theory framework as conceptualised by Shove et. al. (2012), with the addition of affect and emotion, as advocated for by Kent (2015). These concepts are defined below:

> **Ideas:** symbolic meanings, ideas, and aspirations. For example, ideas and meanings behind the ability to drive and the possession of a car, as well as ideas regarding transportation choices.
> **Materials:** tangible physical entities. For example, cars, parks, engines, roads, paths, smart phones etc.
> **Bodily Competencies:** skills, 'know-how' and techniques. For example, driving, parking, handling traffic, navigating roads, texting, and conversational tasks.
> **Affect & Emotion:** affect refers to the physiological or bodily reaction to an object or stimuli (Tomkins, 1991). Emotion is often described as the cultural meaning or social practices of one's bodily response. Hence, emotions can be viewed as the labelling in one's physiological reaction (Probyn, 2000; 2004). Examples of this can be related to one's connection to the car, one's relationships with those sharing the car, how the act of carpooling evokes emotions, as well as positive or negative experiences.

In practical terms, after each transcript was coded, all quotes from that transcript were placed in a table that was categorised by the above concepts. Next, a thematic coding was completed on each analytical code to identify emerging themes between participants. As a result, a vast array of themes were identified, revealing the complexity and richness of the data. Therefore, to make sense of transcripts, the analysis was brought back to the first two overarching research questions:

i. What sustains the practice of carpooling?
ii. What limits the practice of carpooling? i.e., when does carpooling breakdown and/or fall apart?

Through this process different 'cultures' of carpooling emerged, with physical distance playing a crucial role in the distinction between them. The length of the commute to campus resulted in similarities and differences in the commitment to driving the same network of friends; the willingness to sit in close proximity to people in the car; levels and types of sociality; temporal experiences; communication skills; and abilities to pick-up 'random' people. Continued dialogue between the data collected and existing mobilities literature played a crucial role in the final interpretation presented in this thesis.

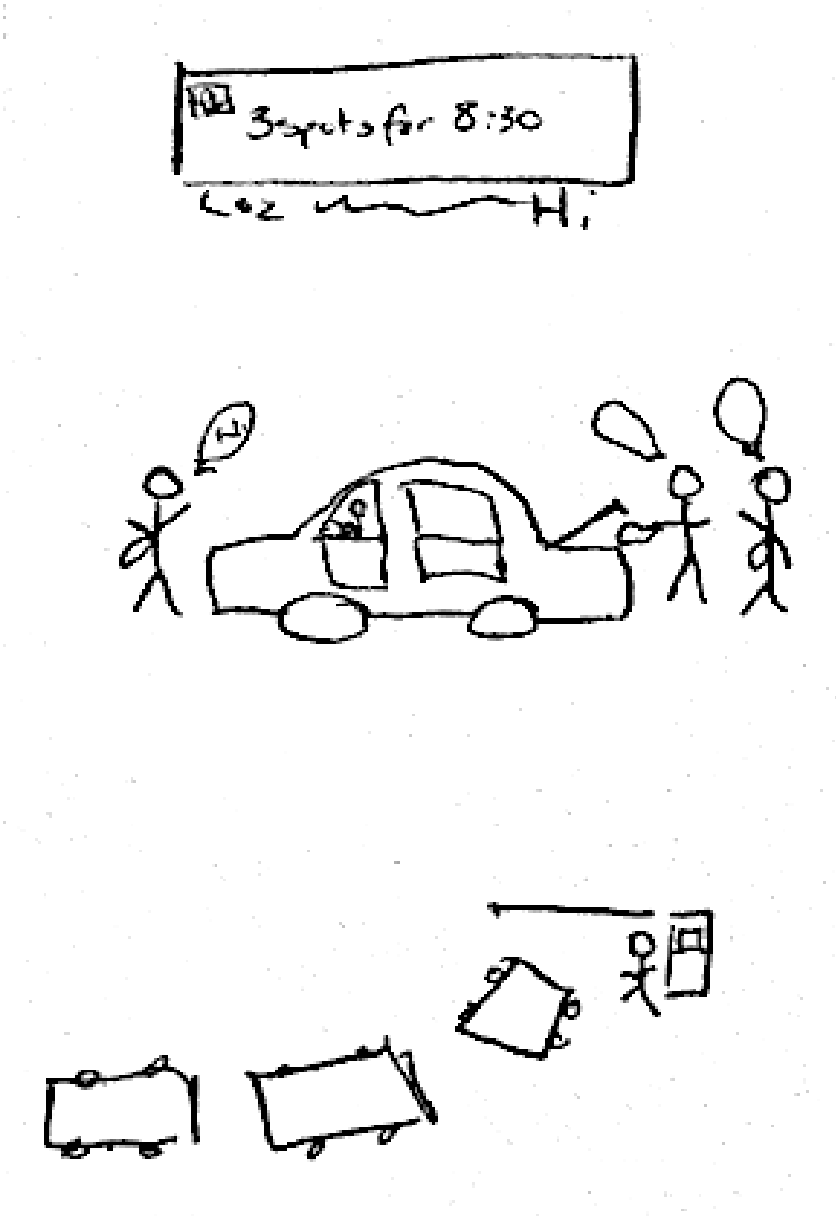
Exploring both the regular and routine, and the more causal and irregular carpoolers, revealed that the practices that underpin participation are experienced at different intensities, and in different ways.

3.7. Conclusion

This chapter outlined and evaluated the methodological choices used to explore student willingness to carpool. Through the use of qualitative mixed-methods, this project sourced data through a combination of semi-structured interviews and interview activities on an online platform. In light of the global pandemic, this project was reconfigured. As a result of the inability to utilise 'mobile' methods, other methodologies were employed to access the lived dimensions of carpool. Therefore, this chapter answers the project's third research question through discussion of the project design and the challenges of conducting qualitative research online. The combination and design of these methods provided insight into the practice of carpooling and students' embodied mobility, allowing for an interpretation of what sustains and limits carpooling participation. Chapter 4 and 5 reveal this interpretation, through the exploration of differing 'cultures' of carpool. Thus, the subsequent chapter will explore the practices that mobilise, sustain, and hinder carpooling participation amongst students within the Wollongong LGA, who residing both on and off campus.

Chapter 4

Casual Carpool: strategic commuting journeys



Participant Sketch: Lucy, Age 24

4.1. Introduction:

This chapter aims to examine the practices that sustain carpooling, and their limitations, amongst students who reside within 10km of the University of Wollongong (UOW) Wollongong campus. An interpretation of the meanings, materials, competencies, and affects and emotions which underpin carpooling is offered through the chapter's four-part structure. First, the chapter explores the scheduling practices of students when residing on student campus accommodation. This section reveals carpooling as sustained through student engagement with campus social media and practices of socialisation. Despite assumptions that carpooling is sustained by environmental or financial values, the chapter shows that it is a sense of ease, sustained by a large pool of potential carpooler within student residences, that underpins casual carpooling. However, this can be disrupted by the uncertainties that arise when commuting with relative strangers. Second, focusing on reflections of participants when living off-campus, but still in close proximity to university campus, this chapter highlights higher barriers to participation without as large a pool of potential carpoolers (compared to when residing on campus) and lower incentive due to other transport options (see section 1.6). Through differing practices of scheduling, and as a result of the mandatory third passenger for carpooling, 'scouting' practices are evident amongst off-campus participants. Reflections from participants, both on-campus and off-campus, speak to important social norms attached to the car's interior. As a result, this chapter's third section examines ridding practices, wherein moral geographies of cleanliness are revealed. This section also illustrates the affective atmosphere created when the car is cohabitated amongst friends on the journey to campus. Lastly, carpooling amongst short-distance carpoolers is revealed to prioritise private car commuting, characterised by a lack of commitment to provide passengers with a return journey from campus. This enables drivers to sustain a sense control over different dimensions of their lives that are spatially diffuse.

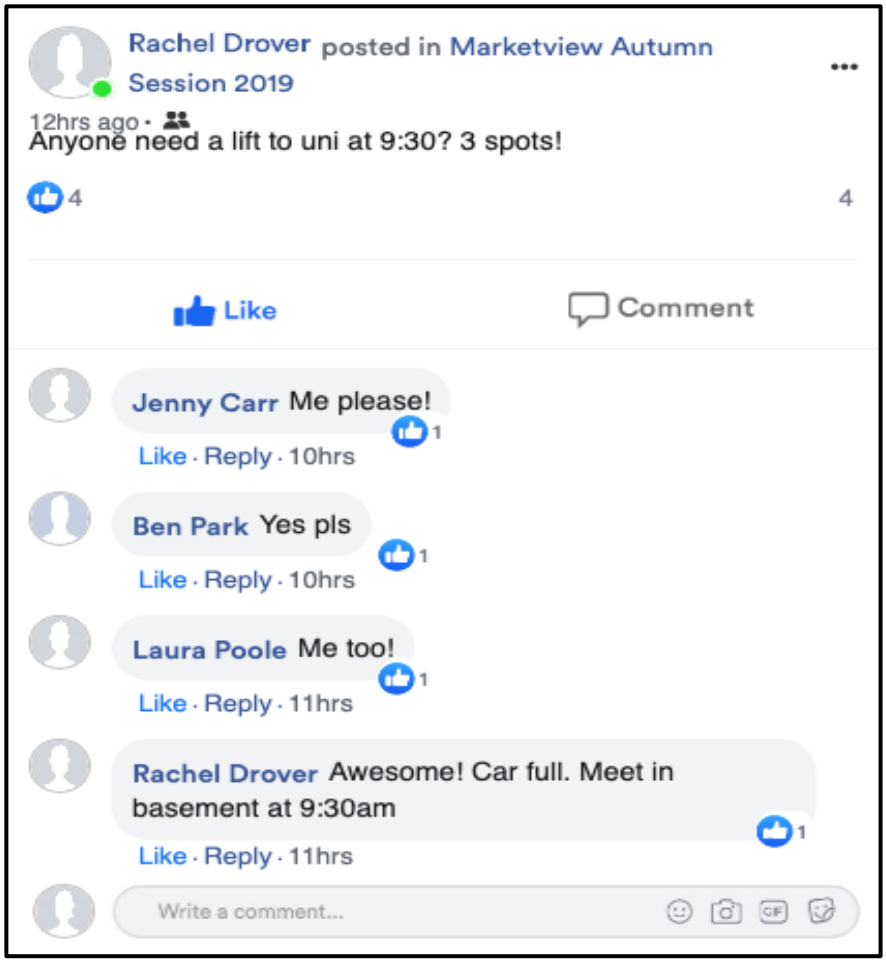
4.2. Student Accommodation Scheduling Practices

One of the differences between carpooling and mass transit, and indeed, between carsharing and carpooling, is that participants in carpool (whether driver or passenger) need to arrange pick-up and drop off times. The process of carpooling is therefore dependent on practices of scheduling that, as the present study shows, differ among carpoolers when residing in student campus accommodation compared to experiences when moving off-campus, but still living in close proximity to the university. Focusing in this first section on carpool within student residences, participant reflections reveal the importance of an established social media site, coordinated by campus accommodation but sustained by the contributions of hundreds of students, in making carpool an appealing and reliable transport mode. Second, scheduling of carpool in on-campus accommodation is underpinned by, and enables, practices of socialisation amongst first year students. Finally, participants highlight that despite residing in the same student residence, disruptions to one's sense of safety and comfort occur when placing trust in relative strangers to transport them to university.

4.2.1. Scheduling Practices through On-campus Living

The University of Wollongong offers multiple student accommodation services, with six student residences located within the Wollongong LGA. A Facebook page administered by the accommodation staff and student resident leaders enables communication between all residents of each accommodation (approximately 100-150 students). This page is not designed specifically for scheduling carpool. However, students become aware of the Facebook page as a mechanism for carpool through conversations with Student Leaders, and those within the accommodation. As illustrated in Figure 4.1, students post requests for carpooling passengers on their respective accommodation pages. Passengers are acquired often through a 'first-in-first-serve' approach. As such, the Facebook site can be envisaged as an incubator, making scheduling carpooling with relative ease possible through a large group of potential carpoolers and the co-location of cars and destination.

Figure 4.1: Simulated Facebook scheduling post



The Facebook page is integral to sustaining everyday life on campus, including the possibility to carpool. Reflecting on her experiences living in campus accommodation, Claire highlights how integral living on campus was to her ability to carpool. She states:

> if I didn't live on campus, and my sister hadn't gone to that uni and done carpooling, I wouldn't have known what it was or how to do it.
>
> *Claire, Age 23*

Therefore, the pool of people made connecting to carpooling easier, as put by Margie (Age 24) "there's a lot of people in the same boat". Moreover, Claire highlights how the visibility of carpooling options, with constant Facebook notifications, make this transport choice more appealing through its ease and reliability when compared to public transport:

> So, when I did live at MarketView [an on-campus student residence] […]looking on the Facebook page and having times pop up and thinking: "Oh, that would be way easier than walking down to the bus stop and catching the bus". Because it would be a bit more reliable if there were any delays or anything with the public transport.
>
> *Claire, Age 23*

Well established in mobilities literature is the idea of car commuting as the "easiest way" (Kent, 2015:735). The ideas that configure mobility as transport, are aligned with, and underpinned by, the desire for ease, efficiency, speed, and comfort (Thrift, 2000; Waitt & Harada, 2012; Kent, 2015). Therefore, as voiced by Claire, the rational, or taken-for-granted choice becomes carpooling. While students aren't supported by a separate platform to connect to carpool, such as an application-based system like those examined in current university carpooling research (Tahmasseby et al. 2016; Kaplowitz and Slabosky, 2018), there is an almost automatic process to the scheduling of commuting amongst on-campus students. Participants note the ease of scheduling: viewing all Facebook posts with departing times, selecting who you want to go with based on personal timetables or relationship with the driver, and then all meeting at the resident carpark—a convenient location for all. Therefore, the limitations expressed in previous literature surrounding pick-up locations (Tezcan, 2015), wait times and accessibility (Shaheen et al. 2016) are not felt in the same way by UOW students residing on campus. Further, with the frequency of carpooling commutes on offer amongst students on university accommodations, Lucy reveals:

> It got to the point where I stopped catching the bus because I could just jump in on everyone else's car […] there was always someone going at my time.
>
> *Lucy, Age 24*

This plethora of carpooling options, in terms of the frequency, accessibility and availability of cars, drivers and passengers, moves participants away from public transport options, despite their own frequency and availability (as outlined in 1.6). The comfort afforded by the materiality of the car's

interior, alongside its design to sit in close proximity to others, is often a preference for participants when desiring social stimulation or connection. As Lucy explains:

> Sitting in a car is a lot nicer than sitting on a bus and having people you don't know bumping into you. Whereas, when you're in a car you're more inclined to get to know the people that are bumping into you.
>
> *Lucy, Age 24*

The design of the car interior, and its confinement and proximity to others, exerts considerable pressure to converse (Laurier et al., 2008). Whereas the social expectations of communication and socialisation is often reduced to the point of polite indifference when commuting on public transport (Laurier et al., 2008; Bissell, 2010). Thus, for Lucy, not only does carpooling provide a convenient and comfortable means of commuting to university, it is also a means for practices of socialisation. The interior of the car creates an affective atmosphere wherein conversations are required and expected. As a result, carpooling acts as a means to create, and build, friendship networks. This is further explored in the subsequent section on scheduling to overcome social isolation.

4.2.2. A means to overcome social isolation: scheduling to make connections in first-year

Residing on student residences involves many uncertainties. For those students moving from their hometowns into a university setting, the need to build new friendships networks can be difficult. Well-established as one common and significant student stressor, are social relationships. A sense of loneliness and isolation arising through difficulties in socially adjusting to a new environment are well-established (Vasileiou et al. 2018). Participants within this study, spoke of carpooling as a strategy to overcome social isolation through establishing a sense of connectedness. For example, Lucy reflected on her experiences of carpooling while residing in on-campus student accommodation, revealing that her transportation choices were influenced by a desire to connect with other students and establish friendships:

> For the most part in first and second year, when I was living on campus, it was primarily carpooling because it was a way to make friends, connections, it was a little bit of a social centre. And then occasionally, I'd catch the bus as well because it was quick and easy, or I didn't like the people that were going in at that same time.
>
> *Lucy, Age 24*

As revealed by Lucy, carpooling for some participants during their time within student accommodation was used strategically to spend time with those peers they wanted to become friends with. Due to the "quick and easy" nature of public transport available to Lucy, carpooling was one of many options to commute to university. Therefore, the most important attribute of carpool for Lucy, was this mobile

and temporary ‘social centre’, which was contingent upon ‘who’ the journey was shared with. Revealed in her reflection below, there is a strategic nature to how she schedules carpool to achieve this social space.

> So, depending on like who was going in, I’d actually look at the Facebook page for carpool to see whether, like, who was going in, and if I didn’t like anyone at one time, I’d actually go in an hour early with people that I wanted to become friend's with [laughs].
>
> *Lucy, Age 24*

Similarly revealed by Claire, carpool allowed students to broaden their friendship networks, finding common interests through common routines. She states:

> In carpool you kind of got to know people who you probably didn’t socialise with before, but you had a common thing – which was like a class at the same time or wanting to go to the library to study. I guess I made a fair-few friends at MarketView from just jumping into random cars.
>
> *Claire, Age 23*

Notably, Hazel refers to this as “self-growth”—throwing yourself out on a limb, despite the uncertainties felt when meeting new people, and building conversational skills. As she explains below:

> It’s nice to just meet new people like, it’s an experience to be able to just get in the car and just—it’s also just semi self-growth by having enough confidence to get into a random’s car and like, even if it’s just the mundane chat of like: “What do you do at uni? Blah blah blah”. It’s still bettering yourself in a way that you know how to make conversation with a random.
>
> *Hazel, Age 23*

This demonstrates how car mobility can create possibilities for conversations. It enables students to build connections amongst their peers through their close, yet temporary, proximity during the journey to campus. Sitting side-by-side, even for short distances, provides participants the opportunity to talk to relative strangers—with the conversations occurring in the car allowing passengers to get to know one another. Hazel’s reflection echoes the work of Laurier et al. (2008), wherein mundane or ‘safe’ conversational topics affectively curate a comfortable space within the car’s interior to engage with peers.

As further noted in the work by Laurier et al. (2008), the shared commute often situates the driver as host towards passengers, a type of co-habitation or hospitality usually reserved for house guests. This

type of hosting is enrolled with moral assessments of passenger conduct, wherein there is a high degree of social expectation for conversation or communication between the driver and passengers during car-commuting (Laurier et al. 2008). For some participants this required socialising is appealing, such as Lucy, who tells of this as one of her primary motivations to participate in carpool. She states:

> It [carpooling] was how I made, I'd say, half of my connections at university. It was how I conned people into being friends with me because I'd be like: "Hey, you have to come into the car with me now". And you got to choose who you got to talk to.
>
> *Lucy, Age 24*

This leads into practices of trial and error amongst on-campus carpoolers when scheduling carpool with relative strangers. The creation of social connections required ongoing experimentation. This is noted by Lucy, who highlighted the importance of the 'vibe' of those you share the commute with; especially when utilising carpool as a means to build friendship networks. She explains:

> I definitely found that there were times when I'd go in at a certain time, and all the people available were just downers. They didn't want to talk in the car. They sucked. So, then I started going in an hour early to study, just because I wanted to have other people in my car.
>
> *Lucy, Age 24*

Therefore, it's evident through participant narratives that carpooling practices amongst students residing on-campus are sustained through practices of socialisation, where said practices are used strategically as a means to overcome social isolation. The design of the car and the distance travelled promotes a particular type of conversation that is conducive to short, introductory, or non-controversial conversations. Hence, another important aspect of carpool scheduling is to build social networks amongst peers, and as noted earlier, this occurs through experimentation—meeting people you might like and sorting out who you don't like. Intricately linked to this, are feelings of trust and safety whether commuting with relative strangers and/or new-found friends. The next section explores these uncertainties, and their impacts on willingness to participate in carpool.

4.2.3. Uncertainties: a sense of trust and safety when commuting with relative strangers

While student residents are supported by the infrastructure of university supported social media to ease the uncertainty of physically connecting to, and scheduling carpool, there are still uncertainties and anxieties that arise for participants when having to rely on others to achieve this commuting practice. The practice of sharing the responsibility of commuting with others can impact upon feelings of safety and comfort because of gendered dynamics. Importantly, for a female student, Margie revealed how

scheduling with relative strangers on campus was impacted by the gender of those she'd be sharing the commute with. For example, she explained:

> I remember when I was on campus and stuff, I always kind of waited to see who had a free spot because I didn't want a car full of boys or something, and I didn't want to be the only girl, or crammed in a small car together. So, I kind of waited to see.
>
> *Margie, Age 24*

The challenge of maintaining a sense of comfort and safety is highlighted by Margie's negotiation of commuting as a woman. Women in patriarchal societies have internalised the burden of their safety during a shared commute, either on public transport or during practices of carpooling or ridesharing, as their sole responsibility (Kalms & Korsmeyer, 2017; Chaudhry et al., 2018). Further, in everyday mobility, women prioritise safety in commuting when making transport choices (Whitzman et al., 2012). Therefore, practices of scheduling are shaped by ideas of safety, and the uneven gender relationships which comprise carpooling journeys. Furthermore, this confirms current carpooling research (see: Shaheen et al., 2016; and Tahmasseby et al., 2016), which position concerns for safety as a significant factor in carpooling participation.

Another cause for anxiety amongst participants is ensuring travel safety. This is linked to the competencies of the carpool driver, when entrusting peers to transport you to university. As reflected by Claire:

> So, some people I didn't know at all, some people I smiled at in the elevator [laughs], some people I knew really well, some people I didn't know at all. So, you just had to trust. I guess another thing that stressed me out a bit was whether or not they were a good driver, or whether their car was safe.
>
> *Claire, Age 23*

These reflections are underpinned by the understanding that journeys to university should be safe—following taken-for granted ideas of safe commuting via all forms of transportation. With the ever-growing accident and fatality tolls, road safety is increasingly positioned as a major public health issue (Bhalla et al. 2014). In Australia, the latest 12 month road death toll was 311 [as of 26/11/2020] with 10,574 hospitalisations of road users in the last 12 months (Centre for Road Safety, 2020). Thus, participants expressed a heightened awareness of putting themselves at risk when entrusting strangers with their safety, especially in terms of their skills as drivers. This understanding of carpooling as a high-risk activity can limit participation, as further explored by Claire:

> I had one experience where I was in the car— someone else's car, and they hit something when we were driving to uni. So that kind of, like maybe for a week after that, I caught the bus.
>
> *Claire, Age 23*

4.3. Do-it-yourself: scheduling practices off-campus

Scheduling practices differ amongst participants who reside within a 10km radius of campus, on off-campus share houses or their own homes (this includes those who may have initially lived in on-campus student accommodation). Importantly, these scheduling practices are unsupported by carpooling infrastructure, such as the on-campus Facebook page. As a result, scheduling off campus involves connecting with pre-existing friendship networks, and often necessitating practices of 'scouting' for a second passenger. Therefore, this section examines how scheduling occurs off-campus, and explores how participants navigate extending an invitation to 'randoms' to cohabit their car.

4.3.1. Moving off-campus: comparison of infrastructure in facilitating scheduling

Unsupported by a UOW Facebook page, the scheduling practices of those living beyond student accommodation services relied on pre-existing friendships groups. Therefore, the scheduling practices that occur off campus resemble a D.I.Y or casual system of achieving carpool. Shaheen and Cohen (2018:3) define casual carpooling as "informal impromptu ridesharing", which is often unsupported by a dedicated I.T. system or platform to schedule the ride. UOW has the parking infrastructure for carpooling, however insufficient technological and social infrastructure exists to support students living off-campus to connect to and schedule carpool. As a result, those participants moving off campus describe carpooling as a less convenient or achievable commuting choice. With participants often noting the loss of the 'automatic' ability to carpool. As Lucy put it, the option to carpool "dropped away" and therefore the visibility and convenience of the other transport options available to students within the Wollongong LGA increased (see section 1.6).

Carpool then becomes a more casual and irregular practice, reliant on pre-existing social networks to schedule the commute. Participants discuss scheduling through a late-night group text message, as told by Hailey:

> I'll just message whoever it is and just say: "Hey, I need to go to uni at 9am, do you need to go tomorrow?". And if they need to go at 8:30 or something, it's no problem to me to go earlier so I can accommodate that.
>
> *Hailey, Age 24*

This depicts carpooling as a fragile achievement, reliant on attempts to match schedules that are enrolled with uncertainties of timetables aligning. This confirms previous research which notes lower levels of

carpooling participation can be linked to concerns regarding dependency on others and irregular scheduling (Tezcan, 2015).

As a result of these uncertainties, for most off-campus participants, meeting carpool requirements ('3 for free') often necessitates inviting a 2nd passenger into the car—what participants referred to as a "random". As noted in existing literature around the embodied relationship with cars, common feelings of comfort and security are associated with automobility (see Sheller, 2004; Waitt and Harada, 2012; Kent, 2015). Therefore, extending an invitation to a "random" person to cohabit the car opens up the driver to a range of potential risks. The strategies deployed by participants to mitigate these risks are detailed in the following section on scouting practices.

4.3.2. Scouting Practices: the emotions, discourse and skills surrounding the second passenger

Due to a lack of supporting infrastructure participants detail how they often 'scout' for a 2nd passenger on the outskirts of the university campus. Alongside this insight, participants also tell of four strategies to help minimise the anxiety of inviting an unknown person into the car. These include: 1) Having a known passenger in the car; 2) Scouting at particular locations; 3) Managing the configuration of passengers in the car; and 4) The use of hosting communication skills.

The first and most important strategy noted by participants was to ensure that they had one known passenger in the car, who would reside in the front passenger seat. As expressed by Jessica (Age 42), her carpool dynamic involves only one random person to avoid "what if" scenarios. This coincides with strategies expressed by participants as women in mitigating potential gendered safety risks (noted in section 4.2.3).

Secondly, participants spoke of "scouting" for a second passenger at known locations, which include bus stops along the university shuttle route, and popular on-street parking locations near campus. "Random" passengers are interpellated as members of the university community before being approached by participants. However, some participants expressed the "turn off" (Claire, Age 23) felt by this practice. Claire is opposed to the practices of scouting amongst UOW carpoolers. She reflects on this as both cheating the system and a significant safety risk:

> When you were walking around the outside of the uni, sometimes people would approach you in their car and say: "Jump in and we can get carpool". And I was kind of like: "no". Like that kind of defeated the purpose, and kind of annoyed me a lot when people would do that. Because obviously you don't know those people and you don't trust them.
>
> *Claire, Age 23*

The third strategy utilised by those who manage to successfully pick up a "random" second passenger relates to the configuration of passengers in the car. As a result of the first strategy of known passenger inhabiting the front passenger seat, the "random" second passenger is designated to the backseat. This enables drivers to protect their personal space, and further avoid those "what ifs". Thus, enhancing a sense of safety and comfort. However, participants reflect on scouting practices as being uncomfortable. They express how it often feels like they're "kidnapping" (Jessica, Age 42) students, due to a lack of supporting infrastructure to connect and schedule a more genuine or authentic form of carpool.

The final strategy that participants speak to is the importance of hosting their passengers. This includes particular communication skills during the one-off, 5-minute carpool journey in order to combat social awkwardness and project hospitality. For example, Margie outlines the set script used to help everyone relax and fill the awkward tensions:

> With the randoms that were picking up, I'd always introduce myself, ask what they were studying, and I guess just have a quick little introduction to what year they were in, what they're studying, and if they're enjoying it, and then you know, thanking them for getting in my car. And that was really all the time that we had to talk.
>
> *Margie, Age 24*

Travelling with a "random", even for a short period of time, may create social tensions. The driver requires the random more than the random requires the driver. As Rachel explains:

> So, in that sense, I didn't really feel comfortable. Although they're inviting you into their car or their space, it almost feels like they don't want you there as the person, it's more for your value.
>
> *Rachel, Age 24*

Consequently, the script followed by most participants, as outlined by Margie is to ensure the "random" is acknowledged as a person, rather than merely just a means to access free parking. The importance of these conversations cannot be overemphasised in sustaining carpooling that involves "randoms". These conversations sustain moral order, allowing carpooling drivers to align with understandings of hospitality. As noted by Laurier et al. (2008), hospitality does not cause car-sharing patterns, but rather contributes to moral assessments of passenger and driver conduct.

As explored in this section, scouting is a practice that sustains UOW carpool. However, scouting can limit participation due to a lack of supporting infrastructure and technology. The necessity to 'scout' for passengers so close to the university campus highlights flaws within the carpooling system at UOW

(see 6.4). As a result, this type of 'carpool' is not necessarily working along the lines of 'best' practice, but rather, to secure free parking for the driver.

4.4. The car's interior as cohabitating space: norms, discourses, and emotions of the shared space

Expressed by all participants are intriguing insights into the norms attached to the car interior, and the affective atmosphere created through the proximity of others. Firstly, this section explores the cohabitation of the car interior as a shared space, which relies on practices of ridding and cleaning. Through participant narratives, the importance of the moral geographies of cleanliness are revealed through ridding the car of materials categorised as rubbish to sustain a car interior felt as comfortable and safe. Secondly, the car interior shared amongst peers is also monumental in sustaining carpool as a desired commuting practice. This is a result of the affective atmosphere created which sustains feelings of togetherness and motivation.

4.4.1. Ridding practices: the social norms of cleanliness and 'good' hosting

When inviting people to cohabit the car interior, all participants shared their anxieties surrounding dirt, rubbish, and clutter. These anxieties were heightened amongst participants living in proximity to university, as they were often more frequently reliant upon cohabitating their cars with relative strangers. The felt affective intensity of certain items offer insights into the importance participants placed on cleanliness. For example, Margie conveyed the affective intensity of fast-food wrappers in the car interior before cohabiting with passengers:

> I'm like: "Oh my god, I ate McDonald's three times this week and it's all in my car!". So um, I kind of do a quick clean beforehand.
>
> *Margie, Age 24*

Here Margie prioritises a "quick clean". Ridding in this case may be understood to restore social order to the interior of the car prescribed by norms of hosting, by removing items that may create offense. At the same time, ridding removed evidence that may raise value judgments by passengers about their driver's food choices, hygiene standards, or lifestyle. Likewise, Lucy underscores the importance of cleaning as part of the expectations of potential passengers. She states:

> Jumping into other people's cars, it's not so much the smells but the clutter and rubbish that's weird. Like I'm sorry, but don't invite anyone into your car if it's a mess.
>
> *Lucy, Age 24*

Therefore, a clean car interior was integral to carpooling. Taken-for-granted were ideas around creating orderly cohabited spaces through the removal of rubbish and clutter that might be offensive.

Expectations that cohabited car interiors should be tidy and not intrude upon the senses was expressed by all drivers living in proximity to the university. Therefore, offensive smells were of concern to participants in triggering negative moral judgements about the driver. For example, Hailey conveyed her anxiety by warning people of an offensive crayon smell in her car. In her words:

> Whenever friends or something, get in the car I'll be like: "Oh sorry about the weird smelling car!"
>
> *Hailey, Age 24*

Hailey is alive to the social norms of having a car that should not smell 'weird'. Likewise, Claire states:

> If the car smelt wet or like, sweaty or gross, I would be like: "Oh great, let's get this over and done with. I'm never carpooling with this person again 'cause their car smells like dog"
>
> *Claire, Age 23*

Previous research into the embodied dimension of cleanliness have demonstrated how younger generations (Generation Y and Z) attach high values towards the presentation of self, in relation to being viewed as 'clean' (see Shove 2003; Low 2006; Waitt, 2014). There is a moral geography to cleanliness, that aligns dirt with 'bad' and clean with 'good'. Amongst participants, creating a clean, and therefore welcoming and comfortable space for passengers, was integral to mitigating negative judgements about themselves. The cohabitated car interior is therefore subjected to social norms of what constitutes being a 'good' host, this includes creating a clean and orderly space when inviting others to share the car.

Well established in the literature is how the car is understood as an intimate personal space, cocooned from the world (see Kent, 2015; Green et al., 2018). Invitations into the interior of cars were therefore read by some participants as offering a window into the drivers' lives. Rachel suggests that entering into one's car is enrolled with a whole series of embodied moral judgements about not only the car, but the person. She explains:

> I think almost the smell of someone's car can tell you a lot about their lifestyle and how they like their space. And also, how they want to show you their space.
>
> *Rachel, Age 24*

Rachel illustrates smells as evoking strong ideas, often aligned with these moral understandings around cleanliness. The interior conditions of the car become a window into the set of ideas that guides a person's life. For example, Rachel, reflecting on the clean cars of those she carpools with, said "they

care enough to share it [their car]". Cleaning the car was thus understood as practice of care for passengers by some participants.

Within current carpooling literature, studies show that negative experiences of carpool often include 'minor' inconveniences such as bad odours in the car's interior and hostility or rudeness expressed by drivers (Shaheen et al. 2016). This study paid particular attention to reflections on the sensory elements to carpool, providing deep insights into how moral understandings of cleanliness and ideas of what constitutes a 'good' host shape car cohabitation, and thus carpooling participation. Therefore, this section has explored how carpooling is sustained by driver/host actions, with particular attention paid to the creation of a comfortable space for passengers. Utilised by drivers are practices of care for passengers, which include ridding and cleaning. Importantly, these practices of care, and the creation of a comfort space within the car's interior can also stimulate a sense of connectedness. This is explored in the subsequent section.

4.4.2. Carpool Commuting: a sense of togetherness & a source of motivation

For both on campus and off campus participants, carpooling, through the close proximity of those in the car interior, creates an affective atmosphere. Participants talk to their experiences of the vibe of the carpool journey as stimulating a sense of togetherness. Furthermore, the vibe of the journey became a source of motivation for students to attend university and tackle the daily challenges of tertiary education. When the journey is shared amongst friends and peers, the materiality of the car, being a confined and intimate space provides carpoolers the opportunity to catch-up. As noted by Elizabeth, carpooling with peers was simultaneous with maintaining friendship networks. She states:

> I think it was good for my mental health for a very stressful year last year because it was so busy. So, it was a convenient way to touch base with my friends without having to organise something and also just shared experiences of being stressed and things.
>
> *Elizabeth, Age 24*

The shared car space facilitated opportunity for conversation. An affective atmosphere is made, remade, and unmade through carpooling conversational interactions and practices (Laurier et al. 2008). As Elizabeth expressed, the "shared experiences of being stressed" changed the value of the commute—moving beyond a means to just simply arrive at university. Therefore, the practice of carpooling itself becomes a support network amongst university students, in which anxieties and stress can be mutually shared. This aligns with mobilities discourse which positions the car in modern society as functioning to serve the need of mobile sociability, connecting and coordinating networks of friends (Sheller, 2004). While most carpooling participants within the Wollongong LGA note that participation in carpool isn't necessarily driven by desires for socialisation, a change in mood and motivation are emphasised.

Carpooling is described as "a great start to the morning" (Lucy, Age 24). While Hailey recalls how the affective atmosphere created with friends when commuting to university alleviated stress around academic performance. She states:

> I am pretty nervous when it comes to doing speeches and stuff in classes. And I had an assignment and my two pals picked me up. And we just blared, I can't even remember what song it was, but it just like pumped me up. And I just went from being like, so nervous and anxious about presenting to, like getting to uni in a good mood and happy. We were all laughing and stuff and um, yeah, I was just like, I kind of felt like, I wouldn't get that on the bus, you know?
>
> *Hailey, Age 24*

For Margie, carpool with friends is enrolled with ideas of obligation and accountability. She expresses that a commitment to carpooling stimulates motivation to participate in university life and study:

> It's more motivating when you pick up your friends and all go to uni together because when you have the option to stay in bed, when you carpool you have to go because your friends are relying on you […] you know that you're there together kind of thing.
>
> *Margie, Age 24*

Therefore, the feelings of togetherness felt by participants when carpooling with friends sustain the desire to continue the commuting practice. Rachel expressed how the inclusive space created amongst peers stimulates a 'want' to continue to commute together routinely. She states:

> Even though it's a small amount of time that you're spending in the car, it's always good conversation and a lot of fun.
>
> *Rachel, Age 24*

4.5. Prioritising the Private Car through Carpool: maintaining a sense of control and negotiating a sense of self

As evident in this chapter, carpooling is a complex and often labour-intensive commuting practice. For participants, the negotiation of achieving carpool as the host/driver is rewarded in the return journey from campus. As revealed by participants, there is an "unspoken rule" of carpool as a passenger being a means to university with no guarantee of a return journey. This unspoken rule enables drivers to commute home without a commitment to driving the same passengers, or any passengers. Therefore, another goal behind carpool scheduling is to enable drivers to sustain a sense of comfort through private car use. For most participants, choosing to be the driver of carpool is underpinned by perceptions of

public transport as unreliable or time-consuming. The desire for transport which is easy, reliable, and convenient results in students to privilege the car over public transport (as noted in 4.2.1). Therefore, drivers are mobilised to carpool as a result of the sets of ideas that configure the car as more reliable, seamless, and flexible. This is expressed by Claire:

> if I drove and then got carpool with people, *I could drive home whenever I wanted* and didn't have to wait for the bus, and, I guess, like combating that unreliable form of public transport— which so often was with the buses at uni
>
> *Claire, Age 24*

Echoed by most participants is this desire to minimise waiting time. Carpooling is viewed as a way to have the private car "right there". This assists participants with greater autonomy over their personal schedules. Expressed through mobilities literature are utilitarian motives of efficiency and autonomy that underpin and sustain private car use (Kent, 2015). Prolific within modern capitalist societies, is the notion of 'time is money'. It is this valuing of time that often cements car use (Dowling, 2000; Sheller & Urry, 2006; Kent, 2015). This is evident amongst carpooling participants who practice carpool in order to obtain convenient access to their private cars. For Lucy, the role of carpool driver was underpinned these ideas of efficiency. She notes that the role of carpool driver afforded her with greater control over her day. In her words:

> All I have to do is wait around for people at the start of the day and it will give me the rest of my day—how I want to spend my time at uni, and when I wanted to leave, all of that stuff.
>
> *Lucy, Age 24*

Lucy further explains how crucial carpool was in making efficient use of her time, in comparison to alternative transportation or carpooling roles. As she reflects below:

> It left exactly the amount of time I needed to get to work, to get home, and all those things. I just had time. Whereas, if I left it up to someone else to carpool or I bussed, or I parked by myself, it just took out a lot of time where I could have been doing other things.
>
> *Lucy, Age 24*

Role preferences have been explored in previous carpooling research, which noted that a preference for carpool-driver as underpinned by 'self-serving' reasons (Shaheen et al. 2016; Park et. al, 2018). Aligning with ideas of convenience and efficiency, Claire (Age 23) describes her preference for driver as motivated by "selfish reasons". She notes that "having deadlines enticed you to carpool more". Thus, appointments, trips to her hometown, or university work, mobilises her to utilise carpool, largely as a

result of this ‘unspoken rule’ of the return journey. Simply put, “I’d go by myself and those passengers would have to find their own way home” (Claire, Age 23).

The cocooning effects of the private car on fatigued bodies is another important aspect underpinning participants’ role preference for carpool driver. This is expressed by Margie and Hailey below:

> Being there from 8 to 5:30, the last thing you want to do is then line up and wait for the bus, and then there is two busloads before you get on.
>
> *Margie, Age 24*

> I like having my car right there so like, if the weather turned [...] or I was tired or whatever, I can just drive home.
>
> *Hailey, Age 24*

Established within, and outside of, mobilities literature are the effects of fatigue in reducing bodily capacities to act and be affected (see Adey et al. 2012). As evident in reflections from Margie and Hailey, feelings of fatigue are important in sustaining car commuting. Fatigue works against the possibilities to put up with all the extra physical work of riding public transport. As argued by Kent (2015:739) “resistance to alternative transport is […] in part, an attempt to negotiate energy expenditure and maintain a body that feels at ease and rested rather than a body that is tired and burdened”. Hence, for participants, the convenience of having their cars easily accessible at the end of their university day are underpinned by ideas of maintaining bodily comfort. This confirms well-established ideas of public transport use as another burden on an already stressful modern life (Kent, 2015).

Understandings of autonomy and control are also expressed by Jessica (Age 42). However, for Jessica the convenience of carpooling is intrinsically linked with sustaining her roles as both mother and student. Mobilities scholars have well established that car mobility shapes understandings of everyday life. Importantly, the car plays a role in sustaining aspects of identity (Redshaw, 2006). As argued by Waitt and Harada (2012:3323), car mobility is “integral to how people make and remake understandings of themselves”. For example, Jessica reflects on carpooling as enabling her to maintain her sense of self as a ‘good mother’. In her words:

> For me it’s convenient to be able to park there and, not just for the money but because it is a battle to find parking there. So often the only way, especially the time I’m arriving after school drop off—and there have been times where I’ve arrived to uni and had to miss a class because there is no parking and I’ve not arranged anyone for carpool!
>
> *Jessica, Age 42*

For Jessica, the role of carpool driver can be understood as a 'transition' tool, alike Shove's (2003) conceptualisation of the shower. It allows her to seamlessly transition between roles and align with her ideas of being a 'good' mother and 'good' student. Commuting to university campus is dictated by whether Jessica can drop off and pick up her children from school. Additionally, Jessica's reflection points to the financial incentive of carpool as one of many. This provides a counteract to a large portion of carpooling literature which places money as the most important incentive to carpool, in the shape of saved petrol costs, parking costs, and public transit fees (Tezcan, 2015; Park et al. 2018). From her reflections, and those of other participants, practices of carpooling are sustained and mobilised by important aspects and responsibilities of individual daily life; in Jessica's case, ideas of 'good' mothering are a priority in her transport choices.

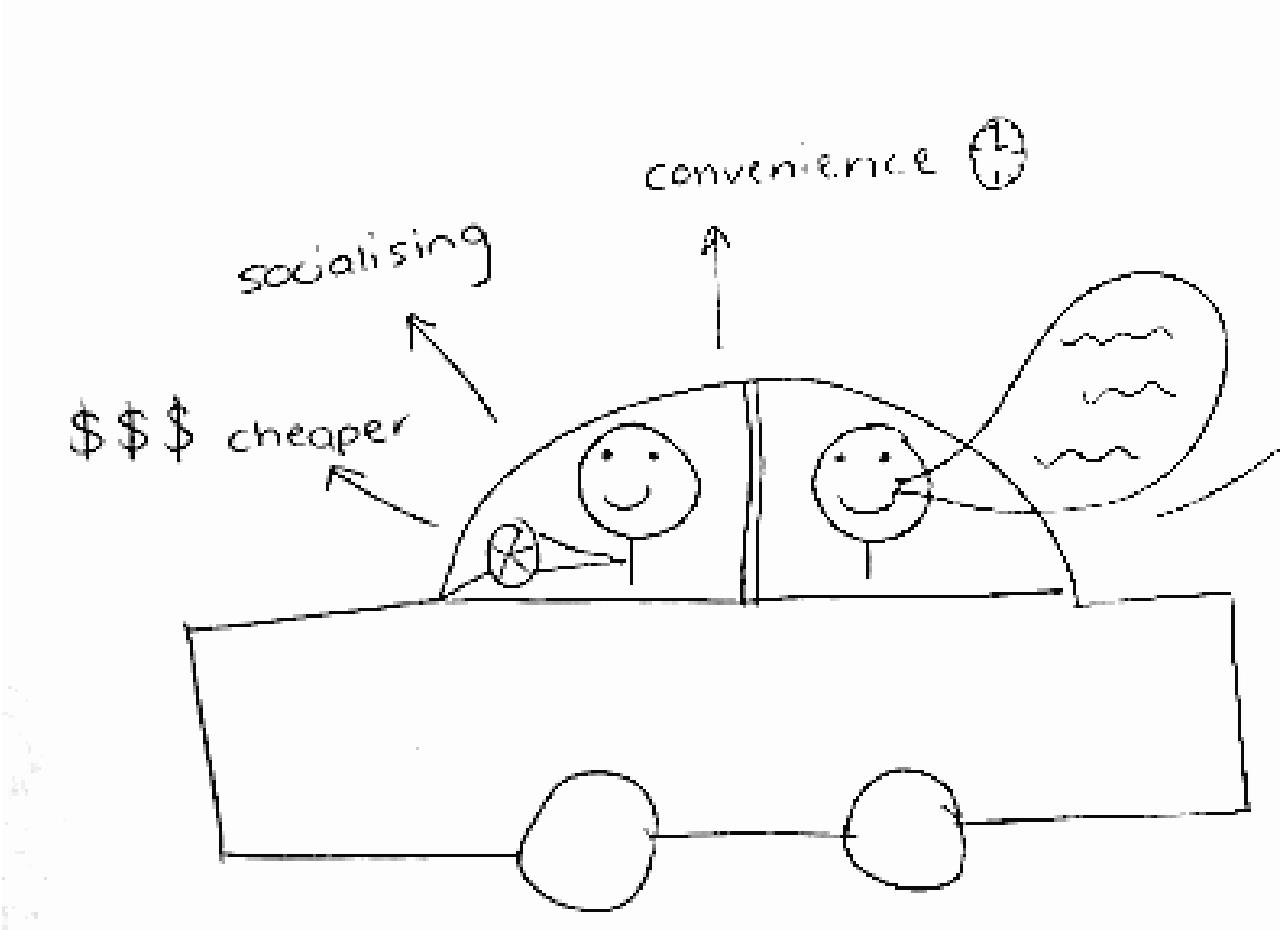
4.6. Conclusion

This chapter explored the practices that underpin carpool amongst students living within the Wollongong LGA. The scheduling practices from both the on-campus and off-campus perspective were examined, highlighting key challenges and differences in infrastructural support to orchestrate carpool. Through an already established Facebook page for on-campus students, carpooling could be seamlessly scheduled. This enabled students to move away from 'unreliable' forms of public transport. Simultaneously, carpool amongst on-campus students was underpinned by practices of socialising wherein participants talk to carpool as a means to overcome social isolation and build friendship networks with peers in co-living accommodation. Contrastingly, off-campus practices of scheduling are unsupported by technological and social infrastructure. Thus, carpooling becomes a more irregular and less routine practice. Moreover, scheduling off-campus involves intriguing practices of "scouting" to achieving carpooling requirements. Through these practices uncertainties and benefits arise, particularly linked to 'who' participants are sharing their carpooling journey with. As a result, this chapter examined the safety and gender dynamics of shared commuting; the affective atmosphere created amongst friendship groups on the shared commute; as well as important insights into cleanliness and hosting practices to maintain comfort and safety. All of which play a role in sustaining carpool amongst students. Most importantly, this chapter examined how carpooling amongst students within the Wollongong LGA is often utilised to maintain a sense of control and comfort through the use of their private cars. Participant narratives revealed a lack of commitment to passengers, with the scheduling of a return journey from campus often non-existent. Therefore, carpooling amongst this group of participants can be viewed as sustaining the dominance of private car commuting. Both on and off-campus participants revealed that carpooling is largely sustained by ideas of convenience, flexibility, and autonomy rather than ideas of sustainability or monetary savings. In the following chapter, these practices are similarly explored, highlighting key differences and similarities in carpool

commuting amongst students who travel from a further distance (more than 20km) to attend university in Wollongong.

Chapter 5

Careful Carpool: in it for the long-haul



Participant Sketch: Gemma, Age 21

5.1.Introduction

The aim of this chapter is to understand the practices underpinning carpooling amongst those who commute longer distances to UOW campus (20km+). Amongst these participants, similarities and differences in the practices sustaining carpool examined in chapter 4 are explored. However, particular focus is given to the notable differences evident amongst longer-distance carpoolers, which is key to understanding how distance (length of commute) shapes carpooling culture. Therefore, the discussion that follows is structured following three key practices. Firstly, scheduling practices are explored. Key differences in scheduling arise amongst this longer-distance culture of carpooling, specifically related to the return journey. Here, important understandings of automobility are explored. For longer-distance carpoolers, scheduling involves return journeys to and from campus. Thus, the regularity and responsibility involved in scheduling and committing to a shared commute is examined in the context of limited transport options. Secondly, this chapter examines long-distance carpooling practices as a shared burden. This section explores the physical and financial strain on students when navigating commuting to campus, and positions carpooling as a way to lighten the load. Finally, discussion turns to socialising practices. The length of time the car interior is cohabitated creates possibilities for rest and conversations. This section discusses the cohabited car as a cocooned and therapeutic space, positioning the affective atmosphere within the car as facilitating a sense of comfort and safety. This is intricately linked to hosting skills of carpool drivers. Importantly, the regularity and routine of carpool as both a means to and from university, in conjunction with the length of the commute, highlights differences in conversational practices and topics. These practices enable participants to build new friendships and sustain pre-existing ones.

5.2. Scheduling Practices

This section will first explore the system of automobility that sustains carpool for students commuting longer distances to campus. Participants speak to the necessity of carpooling in light of the limited, and limiting, public transport options afforded to students residing outside the Wollongong LGA. Similarly expressed are the ways in which they negotiate their commute with known persons. Evident are the important norms that sustain this culture of carpooling, specifically that of responsibility. Subsequently, practices of scheduling are examined. These highlight the emotional intensities that are involved in negotiating and orchestrating a shared commute to campus, revealing the emotional labour of carpool commuting experienced by longer-distance participants.

5.2.1. The System of Automobility: limitations of public transport

UOW is a university of choice for many students residing outside of the Wollongong LGA. While those within the LGA are privileged with multiple transport options, both public and active, outside Wollongong these options becoming increasingly limited. For longer-distance commuting, the car was

positioned by participants as essential in the absence of other options understood as feasible. For example, Penny reflects on the car as integral to her ability to attend university. She states:

> For uni it was pretty much like, that was the reason I had to have a car like ASAP. Just because I *had* to get there.
>
> *Penny, age 22, residing in Picton*

This car dependency is one example of what Urry (2004) termed automobility; that is how time and space have been reconfigured by the car. The car enables the possibility of attending a university 30-80km away from place of residence. This illustrates how car mobility overcomes the friction of distance (Shove, 2003). At the same time, how the car reconfigures time and space creates car dependency because the practices of catching alternative transport modes are understood and experienced as inefficient. In comparison, driving is understood and experienced as efficient. As reflected by Eleanor:

> If I were to take full public transport, from the start from my house from Minto, it would take easily two hours. 'Cause you would need to take one bus to Campbelltown station, and take the other bus to uni. But to save on time I would drive to Campbelltown station, which is about 15-20 but then you have to find parking. So, you have to park really far away and then walk a really far way, so generally you'd have to leave… if I had class at 8:30, I would have to leave my house at like 6:30.
>
> *Eleanor, age 22, residing in Campbelltown*

Private car ownership overcomes the friction of distance created by systems of automobility (Shove, 2003; Urry, 2004). Simultaneously, car ownership creates and helps manage increasingly spatially fragmented lives. Building upon participants' ideas of public transport feasibility, their reflections are enrolled in ideas of flexibility. Confirming what is already well-established in the literature, car mobility enables scheduling to individual timetables (see: Shove, 2003; Sheller, 2004; Urry, 2004; Edensor, 2011; Waitt & Harada, 2012; Kent, 2015). Hence, for longer-distance carpoolers, the car is the only mode of transport which currently satisfies the need for flexibility and autonomy over personal schedules. While there is recognition and knowledge amongst participants of the environmental implications of driving, car mobility satisfies a desire for seamlessness within busy schedules. For example, Ophelia explains:

> But realistically, it was so hard to try and schedule in catching a bus or something, which is obviously more environmentally friendly, into my timetable. Like, when I had two jobs going and three days' worth of uni and plus the assignments!
>
> *Ophelia, age 22, residing in Shellharbour*

The environment comes second to Ophelia as she manages the demands of university and her spatially fragmented life. Likewise, public transport becomes an aspiration for Eleanor when she is no longer juggling a spatially fragmented work-life balance. She states:

> It's just not feasible if you have work and then uni and stuff. And so, I would hope that in the future I would be able to start taking more public transport.
>
> *Eleanor, age 22, residing in Campbelltown*

Despite evidence that suggest many young adults do not aspire to car ownership (Wells & Xenias, 2015; Hopkins et al. 2019), for young adults living more than 20km from a regional university this is not the case. When asked about their ideal transport preference to commute to campus, all long-distance commuters stated they would much prefer using public transport instead of their private cars (regardless of whether they were carpooling or not). This illustrates a gap between what people state their transport preferences are, and what transport behaviours they actually engage in (Waitt and Harada, 2012). The preference of the car for longer-distance carpoolers is enrolled in desires to ease the complexity and burden of managing spatially fragmented lives. If public transport options provided the same reliability, flexibility and convenience as the private car, participants suggested a modal shift. This further positions carpool as sustaining car dependence and working within the dominant system of automobility.

For some long-distance commuters, carpool is positioned as the only viable option of attending university. As a result, participants expressed feelings of frustration when reflecting on the carpooling practices amongst students within the Wollongong LGA. Participants noted greater access to public transport and a shorter commute time for students closer to campus. Therefore, scheduling practices that necessitate the car for long-haul university commuters creates a sense of difference from those living in proximity with transport options. Those students living further away, and car dependent, argue they should be prioritised over those living nearby. As Penny expresses:

> There needed to be more priority to support students that didn't have another option but to drive. Because, even like friends and things that could have got the train would be like "I'll just drive today because I'm running late" and I think, well get the train [laughs].
>
> *Penny, age 22, residing in Picton*

Further, Bethany articulates the sense of frustration with those living in proximity to UOW with public transport options who carpool because they are disorganised or aren't bothered to utilise these alternative options. She states:

> It is frustrating if someone lives 10 minutes away and scrambles some people in the car and grabs the spot, but I guess it's okay because there are still spots left in the area. But even still getting up 15 minutes before class and finding some people and getting to class, it is a bit easy to them than us.
>
> *Bethany, age 21, residing in Campbelltown*

This frustration is further evident of a distinctive carpooling culture, as longer-distance carpoolers feel they are more 'authentic' in their carpooling practices. Bethany's reflection highlights a dichotomy between carpooling cultures; positioning carpoolers as 'us' vs. 'them'. Thus, Bethany's frustration may, in part, be explained by how the process of scheduling for those carpooling at a distance require high levels of commitment and shared responsibility. This is discussed in the subsequent section.

5.2.2. Scheduling amongst friendship networks

Scheduling practices amongst participants who carpool to university at a distance are not supported by university-supplied technological infrastructure (see 4.3). Instead, carpooling to university from a distance is reliant upon pre-existing friendships networks. Scheduling often involves group chat applications on smart phones, pre-established by youth groups, friendships networks or university peers. For example, Eleanor states:

> We had this like really big group chat of like 30 people […]. In the group chat we'd be like: "Okay what are your days? When is someone going to be leaving? When is someone going to be coming back?"
>
> *Eleanor, age 22, residing in Campbelltown*

In order to ensure carpooling opportunities, the size of the group of potential carpoolers mattered. The larger the group, the greater the chances of securing three people whose timetables aligned for the outward and return journey. Unlike those living in close proximity to the university, scheduling carpooling from a longer distance involves negotiating a return journey. What's important to note is that not only does this practice of scheduling differ due to the return journey, it differs in terms of regularity and routine. Scheduling practices often occur at the beginning of new university semesters, where the negotiation of timetables alignments occur to establish a 'fixed' carpooling group and routine. Participants develop a general consensus to establish the commuting 'timetable'. This involves establishing who within the carpool link needs to be at university the earliest and who needs to stay the latest. Participants then configure their commuting schedules based on these times, as the shared journey involves responsibility and commitment to fellow passengers—so that no one is left behind or excluded. As Bethany explains:

> We'd just say: "what time do you start on this day?" and whoever was the earliest, we'd just go at that time—if everyone was keen for it. And usually everyone was keen to just get there for the earliest time. Then, we'd just say: "who finishes the latest?" and we'd just wait for them to finish.
>
> *Bethany, age 21, residing in Campbelltown*

In addition, expectations of university students carpooling from longer distance included the anticipation of being picked-up and dropped off. Accommodating this expectation necessitated patience. For example, Penny states:

> As much as I don't mind going out of the way and things like that, you did have to factor in the little bit of extra time you'd need to like park your car and then get into someone else's car or wait for people when they're like: "Ah I just slept in" and then they're like running late.
>
> *Penny, 22, residing in Picton*

Penny illustrates how carpooling from a distance often involves additional spatial fragmentation of journeys to accommodate passengers. Penny noted how planning for these diversions was part of the expectations of carpooling. Further, this expectation to be considerate of others can create a pressure to be prompt. For example, Penny reflects:

> I tried not to ever make anyone wait for me, especially like if I was driving then I'm always happy to wait for someone else, but it just depended. It normally worked out quite well with the people I carpooled with, like the most I had to wait was like an hour. And I always try and get out of class straight away, I didn't fluff around.
>
> *Penny, 22, residing in Picton*

All participants spoke of their lives as time squeezed. Penny's reflection supports previous carpooling research which positions wait times, location of pick-up and drop-off points, and having to depend on others to achieve the commute, as barriers to participation (see: Tezcan 2015; Tahmasseby et al. 2016; Kaplowitz & Slabosky, 2018; Park et al. 2018). Thus, working against carpooling are the practices of waiting for passengers, and the diversions created by dropping off and picking up. Participants pointed towards the tensions generated through scheduling a shared ride. On the one hand, it resulted in increased time spent on campus and study while reducing the burden of driving. On the other hand, it created a sense of dependency and responsibility. For example, Bethany explains:

> It didn't make it easier in the sense that I had to be there from like 8 until the afternoon. So, it was helpful in productivity but not so helpful, I'd say, in having flexibility with my time, because you have to consider other people. But yeah, driving alone is harder.
>
> *Bethany, age 21, residing in Campbelltown*

Bethany confirms argument that the car as a place of sociality (Laurier et al. 2008; Waitt and Harada, 2016), may facilitate scheduling rides. Yet, over the semester the unwritten rules of responsibility to the regular routine of the outward and return journey may become a source of conflict if broken. As Caroline reflects:

> It would become, like, a point of conflict if I were to be like: "Hey, I don't want to drive you". So, I guess there is that degree of obligation that is created because you create a pattern that if you are to then diverge from that routine, it would indicate red flags for them. And then you'd have to talk about why you don't want to drive them.
>
> *Caroline, age 24, residing in Campbelltown*

Carpooling establishes a social contract as a result of the lack of other transport options to commute to campus. Therefore, as explored by Laurier et al. (2008), carpoolers tolerate one another's company due to the 'common good' or savings they are making by sharing their journey. Hence, the responsibilities and burdens of carpooling are weighted against the perceived and felt benefits. As Caroline explains, the vibe of the journey may not always be social or enjoyable. In her words:

> I mean for an hour I can put up with it. To make up for all of the other things. Like to put up for the fact that I am, at the end of the day, still being able to help them, and I can get free parking out of it. Because there are multiple factors that come into play with the whole commute and the parking, that it's like: if it's an uncomfortable hour, then it's an uncomfortable hour.
>
> *Caroline, age 24, residing in Campbelltown*

For Caroline, practices of scheduling and sharing her car with other passengers is a sacrifice. In her words, she "puts up with it". Her sacrifice is to reap the rewards of convenience and cost savings. Hence, it can be said that the financial incentive of free parking for UOW carpoolers is significant in sustaining carpooling practices. This is similarly expressed in the section that follows, as carpooling is conceptualised as a shared physical and financial burden amongst student commuting longer-distances to campus.

5.3.Shared Burden of Commuting

As noted in section 5.2.1. public transport positioned as an inefficient use of time creates a 'need' amongst students who commute 20km or more to university to favour the private car. Sharing practices are key to understanding carpooling from a distance. Sharing the burden of commuting is an important emergent theme across participant narratives. For example, Gemma (Age 22, Heathcote) understood carpooling as a way to "share the load". Specifically, as discussed in the section that follows, participants spoke about carpool as sharing driving fatigue and financial burdens.

5.3.1. The physical burden of commuting

For some students, journeys to campus aren't "quick and easy" like those described by participants in Chapter 4. Those travelling from places such as Picton, Shellharbour, Campbelltown, and Heathcote utilise the car, and more importantly, carpool at a different intensity than those within the Wollongong area. Those participants whose journeys involve a greater commuting distance, spoke of carpooling as a practice to minimise driving fatigue. For example, Gemma expressed:

> [when I was driving everyday] I was finding like every morning my alarm would go off and I was just like struggling and just did not want to [laughs] get in the car and drive down
>
> *Gemma, age 22, residing in Heathcote*

Fatigue accumulates on the body. As Gemma notes, this works against her affective capacity to drive. Bissell et al. (2017) wrote of intensities in relation to 'super-commuters', highlighting that there are differing intensities of involvement required from individual travellers. 'Involvement' in commuting arises from the negotiation and management of factors such as risk, comfort/discomfort, stress, and fatigue (Bissell et al., 2017). Therefore, carpooling works against the accumulation of fatigue on the long-distance commuter. For Gemma, carpooling becomes experienced as a "safety net". She states:

> That's a big thing with carpooling which I find good. Like, you know, if you are exhausted you don't really have to drive kind of thing, like you can get someone else to, or you just work around it and I think it's really good. You have sort of a safety net too.
>
> *Gemma, age 22, residing in Heathcote*

Long-distance commuting is tiring. The shared responsibility of driving opens up possibilities to not only reduce levels of exhaustion but relieves associated anxieties of driving when fatigue. In Bethany's (age 21, Campbelltown) words, taking turns in driving allowed offered others "the chance to just sit down and not have to worry about driving for one day". Thus, the car offers possibilities for sleep and relaxation as a passenger. Further, the regularity of commuting with peers is enrolled in ideas of care

as relationships between carpoolers are embedded in actions of reciprocity. These actions of reciprocity extend to financial aspects of commuting examined in the section that follows.

5.3.2. The financial burden of commuting

Carpool commuting can be an important cost saving strategy for commuters. Participants in this study expressed that both the shared role of driver, and UOW's '3 for Free' carpooling incentive allowed for the financial burden of commuting to be shared, thus sustaining the appeal of carpool. For some participants, like Eleanor, cost was her primary motivation for carpooling. In her words:

> Because I am saving money, I'll open up my car to people […]. Sometimes I would carpool with people I didn't even enjoy that much just because the uni had the incentive.
>
> *Eleanor, age 22, residing in Campbelltown*

Eleanor expresses a willingness to put up with the discomfort of other passengers in order to access the financial rewards of carpooling to campus. This confirms the work of previous carpooling research (see Kaplowitz & Slabosky, 2018; Tahmasseby et al. 2016; Tezcan 2015), which positions monetary savings and financial incentives as key contributors to carpooling participation. Likewise, Penny spoke of carpooling as a balanced budget. She states:

> For what you pay, like driving [petrol cost], you'd save on parking. So that kind of worked out.
>
> *Penny, age 22, residing in Picton*

For Penny, the costs of petrol are offset by free (and convenient) parking. For some, discussion of petrol costs was a taboo topic. For example, Gemma and Bethany both commented on the expectation that the carpool driver takes on the responsibility of financing the ride to and from campus. They reflect:

> So, we will still fill up our tank of petrol like pay for it um, as like the owner of the car. But then, just not drive down as much. So that's how we would do it as such. So, it's not like: 'Oh I'm filling up, can you give me $10 each?'.
>
> *Gemma, age 22, residing in Heathcote*

> No one has ever asked for petrol money, and I haven't asked for petrol money. It's always just: "Oh you carpooled last time, I'll drive this time".
>
> *Bethany, age 21, residing in Campbelltown*

As argued by Shaheen et al. (2016), there are financial benefits that arise from carpooling through collaborative consumption of petrol and cars amongst peers. That said, for this cohort of longer-distance carpoolers, these financial benefits seem secondary to ideas of convenience and the management of

associated stress and fatigue produced by private car commuting. Importantly, not all participants felt the reduction in financial burden when carpooling. Bethany explains that some carpoolers didn't reflect upon the financial savings because taking turns was important to maintaining harmony amongst the carpooling link by 'pulling your weight'. She explains:

> I never really thought about it reducing petrol costs because I didn't really see it that massively. And we never really chatted about money […]. So, it wasn't something that we were really thinking about. I guess it had helpful outcomes because it might have reduced our petrol costs by one day. But we were never actually able to see the benefits of that. We couldn't really see the money being saved if that makes sense.
>
> *Bethany, age 21, residing in Campbelltown*

Bethany and Eleanor schedule their carpool journeys within the same carpooling link. Importantly, amongst this large carpooling group are students who are only ever carpooling passengers. Bethany highlights the financial strain on others amongst the group when some aren't pulling their weight and contributing to the rotation of driving. She reflects on this by stating:

> Some people weren't driving, so I would have to go pick up one or two people in the morning, and then drive to that 15 minute spot and then carpool from there. So, I think it made me think: "Oh this is just not helpful". In a way it was because I wasn't getting anything in return like it was a disadvantage to me, but I wasn't willing to ask for anything in return as well.
>
> *Bethany, age 21, residing in Campbelltown*

Contrastingly, Eleanor expresses a willingness to ask for petrol money. She reflects upon her 'logic' in doing so:

> [my friend] would never ask for petrol and I'd be like: "Do you want me to drive next week?" or: "Do you want me to pay you some petty [petrol money]?'" And she'd be like: "no, no, it's fine". She'd say: "I'm going there anyways". And I was like, I don't know her logic and that's fine for her, but because money means so much to me, if I'm going there anyways but you're joining me on the journey, I'm going to want some petty [petrol money].
>
> *Eleanor, Age 22, residing in Campbelltown*

Therefore, the shared financial burden is received in differing ways amongst long-distance carpoolers. For most, the discussion of providing petrol money to drivers, or asking for petrol money as a driver, is off-putting and taboo. There is an acceptance that because the driver receives free parking for the day,

and often the role of driver is rotated amongst carpooling links, that the physical exchange of money would seem selfish and could potentially create tension amongst friendship groups.

5.4.Practices of Socialising

This section investigates practices of socialising. Two themes emerge across the transcripts regarding the shared journey of longer-distance carpoolers; 1) possibilities for relaxation, and 2) opportunities to strengthen friendships. As explored in Chapter 4, participants reflect on their experiences of the 'vibe' of the carpooling journey as stimulating a sense of togetherness. Reflected in the culture of longer-distance carpoolers, is the impact of the length of commute which produces a greater emotional intensity amongst commuters. With the ability for longer, more in-depth conversation, the car's interior provides students with a private cocooned space to share anxieties and relieve stress through conversational debriefing. Contributing to this cocooned space are particular hosting skills of carpool drivers in order to adapt and maintain the vibe of the car interior.

5.4.1. Cocooned Space

Longer-distance car journeys offer possibilities to engage in intimate conversations. Indeed, this was the case among participants who reveal how the return journey duration stimulated greater intimacy amongst car cohabitants. Participants regularly note that carpooling return journeys could be "emotional" (Caroline, 24, Campbelltown), generating moments to share personal insights. As Bethany reflects:

> We had debrief sessions every car ride essentially. Like it became a joke that that was what we did, but it was actually really cool. I guess because we have that 45 minutes of doing nothing and you are in this little bubble. We often had deep chats […] we could debrief about our day as well, like anything that annoyed us during the day. Carpool definitely gave us the chance to release that, and everyone would support you.
>
> *Bethany, age 21, residing in Campbelltown*

The duration of car journeys are found to allow deep and personal debriefings amongst occupants (Ferguson, 2009). Well established in mobilities literature, is the understanding of cars as a place in which intense feelings are generated (Sheller, 2004). For long-distance carpoolers, the cohabitated car may be felt as a cocooned space, providing occupants with the opportunity to relax and confide in their co-travellers. This resonates with Laurier et al.'s (2008) observation that shared car journeys may facilitate inter-personal support through intimate conversation. Further confirming literature on automotive feelings, wherein the car's interior is felt as a 'pod' or 'bubble' to those who occupy it—

preventing intrusion from the outside world (Green et al. 2018; Kent, 2015). The felt safety and comfort of this 'bubble' is important in the sharing of personal stories.

Likewise, Caroline reflects on her carpooling journeys as a safe yet confined space through the conversations generated amongst passengers. She states:

> It is almost like The Breakfast Club kind of space. It's not really eating out of anyone's time because they would be commuting anyways. We'd all be making that commute but being able to carpool, and being able to do that together, meant that we could make that commute and we could also utilise that time so that it's more productive; in that it's not just getting from Point A to point B. In that time, we can slightly like de-stress a little bit.
>
> *Caroline, age 24, residing in Campbelltown*

Caroline describes carpooling as akin to the 1985 film *The Breakfast Club*. Intriguing are the parallels between carpool commuting and the Saturday detention underpinning the film's plot. Here, Caroline highlights how the time spent together in a confided space, provides the opportunity for potential friendships to be formed amongst people who wouldn't have otherwise spent time together. Importantly, Caroline's reflection supports well-established notions of how time spent doing things, such as commuting, is not necessarily time wasted (Lyons & Urry, 2005). Just as *The Breakfast Club* depicts, the greatest catalyst for bonding is a common enemy. While the characters worked against their Principal, Caroline and her fellow carpoolers are brought together through shared university-related burdens, such as stress.

The carpooling commute is, therefore, transformed into more than just a means to get to and from university. This confirms well-established literature which argues that the experience of a commuting journey is more important than the physical movement between two points (Edensor, 2011; Laurier et al. 2008; Sheller and Urry, 2006). In the context of this study, car mobility is understood by participants as offering a time-space, through the close proximity of bodies seated in the car, that allows people to relax, and to broker sensitive topics.

Importantly, the affective atmosphere established within the cohabited car also hinges on the hosting skills of carpooling drivers. Participants are alive to the ebb and flow of the mood or vibe of the journey. The experience of the journey is not constant. Therefore, carpooling requires being sensitive to the energy levels generated between travelling bodies. For example, Caroline reflects:

> I think it kind of depends, like you can kind of pick up on the vibes and different signals and stuff and body language; if a person wants to be talking or not or what they want to be talking about. […] I can go from anywhere between like we're all singing melodies to its kind of basically silent and everyone is doing their own things. And sometimes if it's a long day and at the end of the semester people might be like sleeping in the car—which is also totally fine.
>
> *Caroline, Age 24, residing in Campbelltown*

Caroline's reflection confirms literature on commuting bodies, in which those bodies travelling together become sensitive to the affective atmosphere within the car's interior, generated by social-material relationships (Anderson, 2009). As noted by Bissell (2010), the emergence of affective atmospheres amongst passengers have the capacity to effect both physical and psychological comfort. Therefore, Caroline's reflection highlights the practices of care she expresses towards her participants. Importantly, Caroline does not position her car as a private space for herself, that passengers are merely 'allowed' to occupy. Rather she conceptualises her car's interior, through practices of hosting, as belonging to all who occupy it; allowing passengers to feel safe and comfortable enough to sing, be silent, or even rest during the commute. Further, this aligns with literature on the host-guest dynamic that is often created amongst those who share the car interior during carpooling journeys (Laurier et al. 2008).

5.4.2. Building and sustaining friendship networks

The materiality of the car, in its design to sit in close proximity to others, aids conversation amongst the car's occupants. Hence practices of socialising amongst passengers is assisted on carpooling journeys by the car design. Importantly, participants note that when you're in a car with others, you really have no other choice but to talk to each other, or to sit in silence. It is in this silence that feelings of comfort can be disrupted. Therefore, most participants reflect on carpool as this "big social gathering in the mini car" (Ophelia, age 22, Shellharbour). Thus, the positive affective atmosphere created through felt comfort within the car's interior create possibilities to relax and share intimate stories, opening pathways for life-long friendships. The importance of carpooling in making and sustaining friendships was told by a number of participants, even those mobilised to carpool by financial incentives. Therefore, through a sense of connectedness, participants understood carpool as more than commuting to campus, as Bethany states:

> I think the most attractive part of carpooling was that you get to chat to one another—catch up with them and get to know other people.
>
> *Bethany, age 21, residing in Campbelltown*

Participants who were initially attracted to carpooling for financial savings and convenience, acknowledge that the cocooned space of the car's interior was conducive to practices of socialising. As evident in Eleanor's reflection, the formation of "closer personal relationship" contributed to carpooling participation. She states:

> The main goal was always to save money. But I think what I achieve in the end, is actually closer personal relationships with friends. So, because I'm spending so much time with them, driving you obviously just get so much closer and personal because of that private space [in the car]. I think one of the best benefits is for sure friendship.
>
> *Eleanor, age 22, residing in Campbelltown*

Eleanor confirms the literature on proximity and the generation of intimacy through routine patterns of commuting (Bissell, 2013). Therefore, the forging and maintenance of social relationships, and the degree of intimacy or connection felt, is impacted by the distance travelled and the degree of proximity to those who share the commute (Bissell, 2013). Hence, amongst longer-distance carpoolers the regularity and routine of carpooling journeys provides students with the opportunity for social connectivity.

As further elaborated by Eleanor, the carpooling commute can replace more conventional socialising practices. She states:

> It's a really easy way to catch up with friends instead of like having a very rigid 'oh let's go out for coffee' kind of thing. Because then it's like 'ugh, alright now we have to like catch up and do this whole thing'. Whereas in carpooling […] there is no set thing that you have to talk about, or do, because you're just driving together and so it's really just hanging out with a friend.
>
> *Eleanor, age 22, residing in Campbelltown*

Reflected in Eleanor's statement are well-established ideas of sociality that occur within the car's interior. This further builds upon the arguments presented by Waitt and Harada (2016), wherein the materiality of the car affords commuters the opportunity to dwell together in light of busy personal schedules.

Finally, the overall university experience for students who are travelling from a long distance to attend university is tied to carpooling. Penny (Age 21, Picton) tells of carpooling as a "shared experience between people who also lived up here [Picton/Bargo area] that went to uni". As a unique experience, Penny further states that carpooling is "really engrained in my memories of uni and the times I had".

Similar to those university experiences of on-campus/close proximity students, commuter students also note carpooling included possibilities to alleviate feelings of social isolation and disconnection from university life (Nelson et al. 2016). Hence, Penny states that she never got to experience "getting turnt [drunk] at UniBar on a Wednesday" like those residing close or on campus. Instead, carpooling provided her with the ability to connect to peers and experience a unique university culture. This is further explained by Bethany, as she reflects on carpool below:

> I think with uni life it definitely improved it socially, just feeling more conformable about uni and things like that. […] I think if I didn't have that [carpooling], it would be a very different. So, it [carpool] improved uni life quite a lot especially in those formative years of uni.
>
> *Bethany, age 21, residing in Campbelltown*

5.5. Conclusion

This chapter explored the practices that underpinned and sustained carpooling journeys amongst students who reside 20km or more from UOW Wollongong campus. Evident within this chapter were key similarities and differences in practices of scheduling, socialising, and hosting between this longer-distance culture of carpool, and the culture reflected in Chapter 4. The most crucial insight when comparing these two groups are the differences in intensity and emotional work when negotiating carpool journeys. As explored, longer-distance carpoolers must organise their mobility considering time-space automobility and limitations of public transport options. Therefore, participants revealed insights into how carpooling at a distance is sustained differently than carpooling amongst students living in close proximity to UOW campus, thus generating an 'us' and 'them' dichotomy. Important to this distinction, was the burden of commuting felt by longer-distance carpoolers. Thus, scheduling practices and carpooling routines were sustained by ideas of reciprocity and care amongst carpoolers, in order for the burden to be shared. Additionally, the duration of the carpooling journey was revealed as enabling students to sustain and develop friendship networks; enhancing their overall university experience. Crucial to this, was the affective atmosphere felt through the cocooned space of the car's interior. As a result, the journey duration was an important site to share experiences about life and university. Through these practices of debriefing and distressing, participants conceptualised carpool as a cocooned or therapeutic space. Finally, this chapter highlighted that carpooling journeys for longer-distance commuters, both the outward and return, were sustained through pre-existing friendship networks, alongside ideas of responsibility, reciprocity, and skills of negotiation. This points to policy implications in terms of infrastructural support provided to carpooling participants, as carpoolers must self-organise journeys. These implications are examined in Chapter 6.

Chapter 6:
Conclusion

6.1. Introduction

To conclude, this chapter will first reflect on research positionality. Second, the research aims will be revisited with key findings summarised. Third, policy implications are outlined. Finally, future research agendas presented.

6.2. Positionality reflection

Following Waitt (2010), the researcher's positionality was reflected upon during all project stages in a research diary. Section 3.2.2 presented the initial thoughts prior to commencing data collection. Box 6.1 presents reflections when 'looking back' on the project.

Box 6.1. Looking Back: Researcher Positionality

Looking back: my reflections

Working through data analysis has further stimulated my intrigue of student mobility practices. Importantly, carpooling amongst my small group of participants, is sustained by far more intriguing aspects than I thought possible. While my positionality as the researcher aligns me closely with carpoolers on and off campus (but in proximity to the university campus), the concepts that have emerged have caused me to rethink my own experiences and choices.

My commuting practices over the last 4 years of residing in Wollongong and attending UOW have positioned me as a private car driver, a bus passenger, a carpool driver (when residing on student accommodation), and a carpool passenger (when residing both on and off campus accommodation).

The decision to be any of these possibilities, to me, was automatic. It predominately hinged on: "okay, what mode do I feel is going to get me to campus the easiest today?". However, the decision was also impacted by whether roommates or friends were joining me on the commute to campus (by bus, or car, or footpath), whether I wanted company, whether a roommate or a friend was late, whether I was late. This plethora of commuting options when attending university is a privilege. This project has allowed me to engage critically with the subjectivities of mobility choices (including reflection upon how my gender influenced my carpooling practices on and off campus—and how they impact my actions of public transport or during active commuting such as walking). Coming from a small town with virtually no public transport (I took my first train ride when I was 18!), the freedom of not having to drive, of not being responsible or parking or navigating roads, traffic, and incompetent drivers, was a lifted burden.

Upon reflection on this project, that lifted burden is a privilege as a commuter. My commute to university involves scheduling myself (as a single person with no dependents) and having multiple options to commute—with buses close to my house that run every 5-10 minutes, a 30 minute walk to campus, or a 2 minute drive. This project, in a way, removed my rose-coloured glasses. Commuting to campus is largely a part of the university experience. Hearing the ways in which my friends and peers, specifically coming from a further distance, must negotiated and plan their commutes so intricately highlights many flaws in overarching transport systems, and societal-level car dependency.

This project has left me eager to understand wider patterns of shared mobility, specifically in the university context. This small study is a stepping-stone in understanding how students must manage their mobility within both transport system infrastructure and their own lives and identities.

6.3. Revisiting the Research Aims

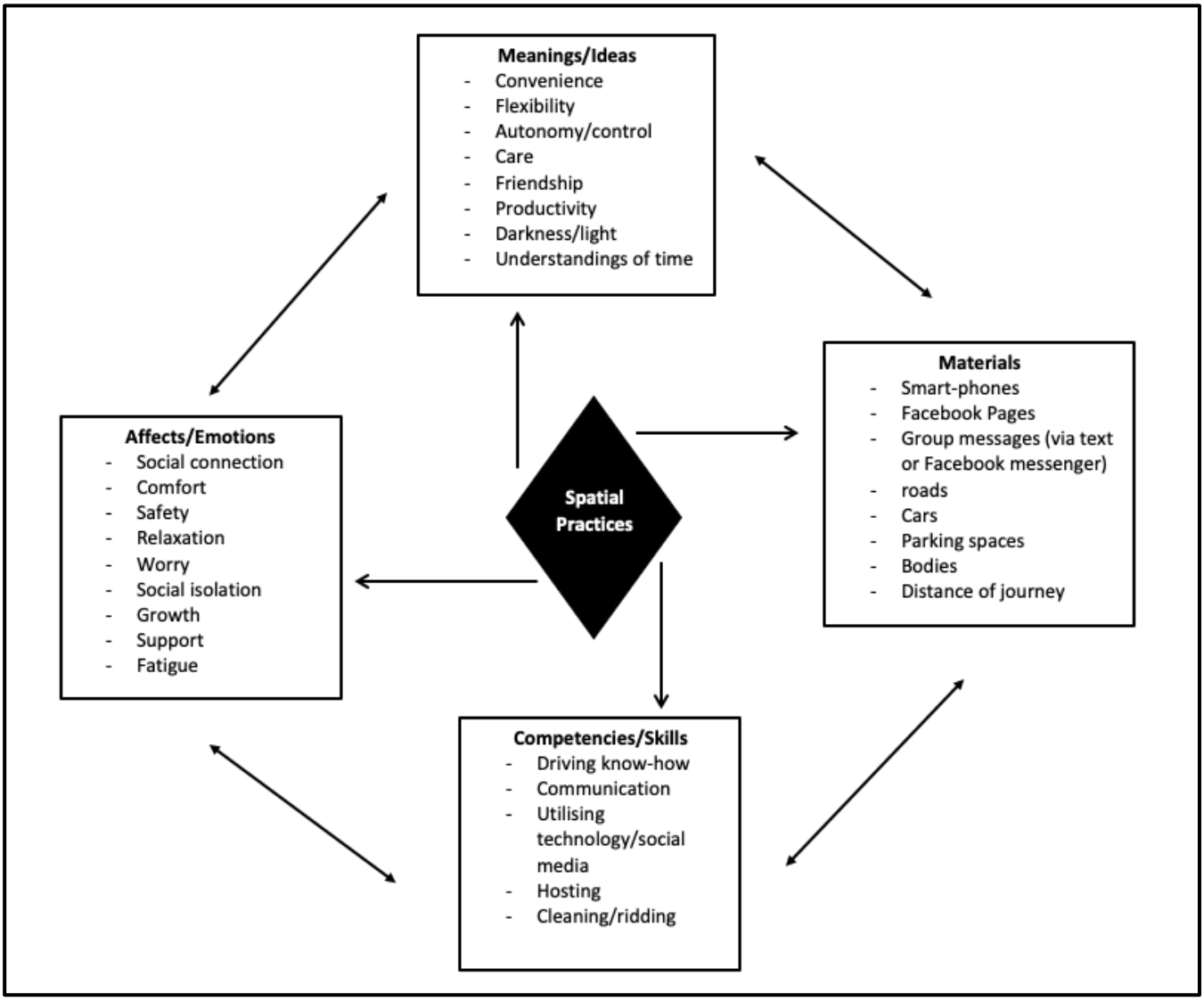
The overarching aim of this project was to better understand why university students were willing, or not, to share their cars on journeys to campus. As noted in Chapter 1, this study emerged in order to better understand declines in carpooling participation at UOW, alongside growing recognition of the implications of car commuting for the environment, transport infrastructure, and health. Carpooling is positioned as a more sustainable transport mode, lending itself to more conservative approaches of addressing sustainability that retain a focus on car mobilities (Olsson et al., 2019; Gallo & Buonocore, 2017; Shaheen et al, 2016). In light of UOW's incentivised carpooling initiative, three research questions underpinned this project.

1) What sustains the practice of carpooling?
2) What limits the practice of carpooling? i.e., when does the practice of carpooling fall apart
3) What can we learn from conducting research online in response to a global pandemic?

Chapter 4 and 5 addressed the first two of these questions. Evident in the analysis was the emergence of journey duration as shaping distinctive practices that sustain or hinder carpooling. Therefore, Chapter 4 and 5 examined the practices of carpooling amongst students who live within the Wollongong LGA and those 20km or further from UOW Wollongong campus, respectively.

Social Practice Theory, as explored in 3.6, guided the analysis. Figure 6.1 offers a summary of key conceptual components of the analysis. Social Practice Theory moves understanding of carpooling beyond students merely commuting from their homes to university campus. Carpool journeys can simultaneously provide students with feelings of comfort, support, and social connectedness. However, this cocooned space of the car's interior requires ongoing coordination, including scheduling, hosting, scouting, and ridding, and thus, practices of carpooling require the emotional and physical labour of participants. This is evident, in varying degrees, amongst both carpooling cultures identified in this thesis.

Figure 6.2. The Spatial Practices of Carpooling



Chapter 4 illustrated five key findings. First, the chapter explored the scheduling practices of both on and off-campus students within the Wollongong LGA. This highlighted key differences and challenges in supporting infrastructure available to students to carpool. Sustaining carpooling at proximity to campus were student accommodation Facebook pages. Such platforms, combined with the concentration of potential carpoolers living in the same location, and travelling to the same destination, facilitated an ease of scheduling. Second, when off-campus, participants revealed that 'scouting' for a random second passenger was vital in benefitting from UOW's '3 for free' parking scheme as off-campus students often had no supporting infrastructure to schedule carpool. Third, as a result of 'who' the journey was shared with, cleaning and hosting skills were revealed to underpin student willingness to share their own cars or to be a passenger in another. Fourth, alongside hosting skills, the affective atmosphere within the cohabitated car provided participants with the opportunity to build and sustain friendship networks. However, participants revealed that carpool participation was largely underpinned by ideas of the car as convenient, easy, and flexible. Therefore, the fifth finding within this chapter

illustrates carpooling practices amongst students residing in close proximity to campus, as characterised by a lack of commitment to the return journey of passengers. This stems from carpooling as just one of many transport options available to students within the Wollongong LGA (see section 1.6). Consequently, this form of carpooling is utilised to sustain a sense of control and comfort for drivers. Hence, it is suggested that carpooling at UOW, for those who reside in close proximity to campus, is sustained by ideas of convenience, flexibility, and autonomy, rather than sustainability.

Chapter 5 depicts carpooling as a more regular and routine practice for longer-distance carpoolers (those who reside 20km or more from campus). This chapter comprises of six key findings. First, carpooling journeys amongst these participants are sustained by practices of scheduling through pre-existing friendships networks. Second, participant narratives revealed understandings of public transport as inefficient and thus not a feasible option within their time-pressured lives. Third, for students residing outside of the Wollongong LGA, carpooling is spoken about as a shared burden, considering the limited, or limiting, transport options to campus. This provides participants with the opportunity to share the physical burden of commuting up to 80-90 minutes a day in order to manage their fatigued bodies. Underpinning this shared burden are ideas of responsibility and reciprocity in the routine of carpool created amongst longer-distance commuters. Therefore, the fourth finding illustrates the limited transport options for those residing outside the Wollongong LGA. A key component amongst this culture of carpooling, is the responsibility and commitment to the return journey. This can be both beneficial and restricting to individual mobility, impeding upon the flexibility and autonomy of drivers, however providing a guaranteed ride home. Thus, ideas of sustainability take a back seat, with carpooling sustaining private car dependency. Fifth, participants speak to the cohabitated car as fostering opportunities for peer support and the maintenance and building of friendship networks. Therefore, the positive affective atmosphere created within the car's interior contributed to the desire to continue to carpool. Lastly, participants expressed that there is a lack of university-supplied technological infrastructure to aid scheduling carpooling journeys. This is especially important in combatting the misalignment of timetables amongst friends. As a result, participant narratives reveal a 'them' vs 'us' dichotomy, with long-haul participants noting that they require greater support to commute to campus than their closer counterparts.

In light of the COVID-19 pandemic, Chapter 3 addressed the third research question:

What can we learn from conducting research online in response to a global pandemic?

In answer to this question, Chapter 3 offers a justification of the qualitative mixed-method approach utilised in response to face-to-face research restrictions. The chapter outlined the challenges posed and insights gained from researching the embodied and affective dimensions of mobility across online

platforms. Thus, four key aspects of conducting research during a global pandemic were discussed. First, recruitment challenges were detailed, highlighting the impact of COVID-19 and the necessity for multiple recruitment strategies. Second, challenges in utilising online technologies were explored with key implications of conducting research online detailed, including: building rapport, maintaining the rhythms of oral communication, and the use of bodily communication. Third, the chapter examined the role of interview activities in accessing emotions and affects. This positioned the incorporation of activities as a way to gain insight into non-conscious, non-verbal dimensions of carpooling experiences, in light of the restriction upon 'mobile methods'. Finally, the role of interview questions and structural design in accessing emotions and affects were assessed. Wherein the carefully constructed interview questions and flow were able to ease participants into reflections upon carpool through the exploration of their emotional connection to the car itself, their transport preferences, and available options, as well as how their journeys to campus are negotiated.

6.4. Policy Implications

Two key UOW policy implications arise from this research. First, carpooling is not a uniform practice. Thus, targeting carpooling participation requires appealing more specifically to the differing cultures of carpooling amongst UOW students to facilitate greater interest and targeted support. Through chapter 4 and 5, the ways in which carpooling works within the paradigm of automobility illustrated points of differences between cultures of carpoolers. For the shorter-distance carpoolers (explored in Chapter 4), carpooling is all about individuality, convenience, and control. While for longer-distance carpoolers (Chapter 5), the car is essential to the time-space reconfiguration that sustains the possibility to attend university at Wollongong while residing at a distance in Campbelltown, Picton, Shellharbour, and Heathcote. Therefore, it is recommended that engaging with the differing carpooling cultures amongst students is vital to identifying which students are participating more in carpooling initiatives, and equally vital in designing a carpooling system which fosters greater appeal and participation. Importantly, what is often conventionally overlooked when exploring the overall university experience of students, are their journeys to campus. As evident in Figure 6.1., carpooling contributes, in varying degrees, to maintaining and creating friendship networks, facilitating peer support, and providing opportunities for relaxation amongst both carpooling cultures. Therefore, this study highlights that the journeys students undertake when getting on-to campus cannot be separated from the overall university experience. The journey to campus may play a crucial role in university attendance, and student well-being (particularly in relation to social connectivity). This is equally as important when engaging students to utilise carpool as a commuting option to campus.

Secondly, this research revealed that investment in online or app-based technologies is required to facilitate greater scheduling of carpooling journeys. While this study demonstrates carpooling infrastructure for on-campus students through campus accommodation Facebook Pages (of which

scheduling occurs in a more ad-hoc way as the purpose of the page is general university support), there is no designated, purposeful, or specific carpooling infrastructure available to all UOW students. Taking the lead from participant feedback, technological and social infrastructure to allow students to connect and organise carpooling with other students, known or unknown, is crucial to facilitating interest and participation. Participants expressed ideas on how to minimise risks to themselves as well as potential unknown passengers. For example, they talk to formalising carpool at UOW through suggestions such as designated spots for public transport users to opt into carpooling should a driver pull up; identification stickers on car's for passenger safety; and registration of users through a website or application-based system to safely match drivers with passengers. Critically, other Australian universities who offer carpooling, such as the University of Newcastle, Monash University, and Deakin University, have utilised application-based systems such as Liftango to facilitate carpool commuting amongst students. Liftango is a dynamic carpooling technology which aims to provide a safe and convenient means to scheduling carpool. They provide each university with a private network, which requires users to be an enrolled university student or staff member when signing up (Liftango, n.d.). The importance of utilising a platform such as Liftango is twofold. First, for scheduling more 'authentic' and 'best-practice' carpooling journeys amongst students. Second, to provide students with the opportunity to connect and participate more broadly in university life.

6.5. Future research

Two avenues of future research are proposed. First, a deeper understanding of how subjectivities are made, unmade, and remade through practices of carpooling are necessary. On conceptual grounds, one critique of Social Practice Theory (SPT) is that centrally missing from the framework, as conceptualised by Shove et al. (2010), is the engagement with subjectivities. Critical to understanding mobility practices are the ways in which identity and sense of self are constituted (Husband et al. 2014; Waitt et al. 2017). The fourth chapter of this thesis touched on how subjectivities are negotiated by students when participating in carpool, with specific reference to gender and parental roles. Therefore, further research should build upon how these subjectivities are made, unmade, or remade through carpooling practices. Mobilities scholars have explored the ways in which automobility, and specifically the car, can be linked to identity, as a tool within social context (Gilroy 2001; Alam, 2006). As evident in this thesis, mobilities scholars have responded to the call to examine "automotive emotions" (Sheller, 2004:223). Most recently, scholarly attention has focused upon how sensations of car mobility enables the (re)construction of subjectivities (Waitt et al. 2017). Therefore, while SPT has enabled examination of how carpooling practices are constituted, missing are deep insights into how the car, and the cohabitation of the car's interior, enables drivers to reconfigure notions of self. This is crucial to understanding carpooling participation and the university experience, and therefore, critical to the design of carpooling systems that occur along the lines of 'best' practice. A project focussed on

carpooling subjectivities would benefit from a larger sample with greater diversity amongst participants; along the lines of parents, carers, gender, age, ethnicity, and ability.

Second, future research may seek to embrace ‘mobile methods’ (see: Büscher et al. 2010; Harada and Waitt, 2012; Merriman, 2014) to gain further insights of the lived experience of carpooling journeys and student mobility. As discussed in 6.4., evident within this study are the importance of sensations generated through moving together in a car. Therefore, the use of ‘mobile methods’ could engage more deeply with these sensations, and more deeply with the non-conscious and non-verbal dimensions of carpool commuting.

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Appendix A: Additional Conceptual Frameworks

Assemblage-thinking

Deleuze and Guattarri's (1987) 'assemblage thinking' helps to conceive of mobility as an ongoing achievement, the outcome of socio-material arrangements (Waitt & Harada, 2013). Following Deleuze and Guattarri (1987) journeys may be understood as a relational achievement, a socio-material arrangement or assemblage (Clement & Waitt, 2018). In Deleuze and Guattarri (1987) an assemblage in understood as comprising of expression (emotion, effect, ideas) and content (materials, bodies, actions). Thus, an assemblage is conceived as a working arrangement that is maintained through the forces of both human and non-human interactions (Anderson & McFarlane, 2011).

One expression of an assemblage is a territory, a place in which one feels at home, being secure and comfortable. For example, the space of the interior of a private car may feel like home. Indeed, the car is discussed by participants within this study as an extension of one's home; embedded in the quasi-private mobility afforded by the car. Experiences of home may be produced and reproduced within the car through the social and material relations that occur through the space of the road. However, following Deleuze and Guattarri (1987), this space or territory is neither fixed nor stable because it is comprised of the flows of expression alongside forms of content. Instead, the space of the interior of a private car may be conceived in terms of a process of territorialisation and deterritorialization. Territorialisation keeps the forces of chaos at bay by generating a sense of comfort and security. Deterritorialisation occurs when forces of chaos challenge this sense of comfort and security, such as darkness, a speeding car or break down. Reterritorialization is process of re-establishing the territory through excluding the forces of chaos.

To conceive of carpooling through the lens of assemblage requires thinking about the interior space of a car as territory that is made and remade through the coming together of expressive and material forces. Attention is given to the ideas and things that are brought together to enable the sharing of the interior of the car through a process of territorialisation and reterritorialization. And, at the same time, attention turns to the process of deterritorialization, in which events or moments generate forces that disrupting the sense of comfort and safety.

Rhythm-analysis and the Ordering and Disordering of Space-Time

Lefebvre's (2004) rhythm-analysis addresses questions of the relationship between time and space in geography. Rhythm-analysis conceives space and time as produced through the material flows of people, things, and objects; a rhythm exists wherever time, space and an expenditure of energy coincide (Lefebvre, 2004). In this approach rhythm is something inseparable from understandings of time and of repetition (Lefebvre, 2004). Rhythm in one sense, can be seen as a type of orchestration of space. It is through routines, habits, flows and the qualities of different materials and technologies in relation, that space coheres and comes together. Therefore, the focus of this approach lies within spacetime-making. Like assemblage thinking, space is conceived as fluid rather than static. In mobility studies, rythmanalysis is used to help rethink the experience of journeys as unfolding rather than merely the time taken to move between two points.

Tim Edensor (2004; 2011) envisioned mobility, and specifically commuting, as a practice that largely sits within the context of multiple rhythms. These rhythms can be conceptualised as part of the social thread of one's life, either institutionalised or habitual (Edensor, 2004; Kent, 2013). The patterns of mobility and the flow that commuting creates "contribute to the spatial-temporal character of 'place'" (Edensor, 2010:5). Mobile rhythms include aspects of commuting such as traffic lights, speed limits, laws and codes of the road, and the layout of the route of travel such as the road and the highway exits (Edensor, 2011). Commuting, in this respect, is sewn together by rhythms of all kinds (bodily, social and climate) which shapes and forms places and dimensions (Edensor, 2011). Not only are the rhythms of larger and collective patterns embedded in one's commute, but distinctive temporalities can also be produced through commuting, this can be especially seen in 'rush hours' (Edensor, 2011). However, the synchronic flow that gives rise to positivity and comfort may be subjected to disruption, creating antagonism. This may form either from weather condition, road, and rail infrastructures or even the scheduling of others sharing the commute (Edensor, 2011).

Appendix B: Ethics Approval Email

From: irma-support@uow.edu.au <irma-support@uow.edu.au>
Sent: Tuesday, April 7, 2020 4:13 PM
To: Nicole Cook
Cc: Gordon Waitt; Nicole Cook; RSO Ethics
Subject: HREC Review of Application 2020/155

Dear Dr Cook,

I am pleased to advise that the application detailed below has been **approved**.

However, please note that in light of the current COVID-19 situation and recent advice from NSW Health, the University of Wollongong has introduced changes to research activities that involve face-to-face interactions. All data collection requiring face-to-face contact with human participants has been suspended from midnight on Friday 20 March 2020 until further notice. In line with this, the HREC's approval of this application is on the basis that all face-to-face interactions involved will not commence until the restrictions have been lifted. Please refer to https://www.uow.edu.au/coronavirus/researcher/ for the most up to date information.

Ethics Number:	2020/155
Approval Date:	28/04/2020
Project Expiry Date:	27/04/2021
Project Title:	Carpooling Cultures: Learning from University Students on-the-move
Researcher/s:	Cook Nicole; Horton Jacqueline; Waitt Gordon

Documents Approved:

- Research Protocol V2 15042020
- Written Response to HREC Feedback V2 22042020
- Written Response to HREC Feedback V1 16042020
- Participant Information Sheet V3 22042020
- Consent Form Stage 1 Semi Structured Interview V3 22042020
- Interview Questions V1 01042020
- Social Media Script V1 15042020
- Email Script V1 15042020
- Video Instructions V1 01042020
- Pre-interview Activities V1 (Submitted 01/04/2020)
- Passenger Information Sheet V1 10032020
- Budget (Submitted 01/04/2020)
- Email from Environmental Unit V1 09032020
- Ethics Training Certificate - Gordon Waitt
- Ethics Training Certificate - Nicole Cook
- Ethics Training Certificate - Jacqueline Horton

Sites:

Site	Principal Investigator for Site
Online via Skype or Zoom	Jacqueline Horton

The HREC has reviewed the research proposal for compliance with the *National Statement on Ethical Conduct in Human Research* and approval of this project is conditional upon your continuing compliance with this document. Compliance is monitored through progress reports; the HREC may also undertake physical monitoring of research.

Approval is granted for a twelve month period; extension of this approval will be considered on receipt of a progress report **prior to the expiry date**. Extension of approval requires:

- The submission of an annual progress report and a final report on completion of your project.
- Approval by the HREC of any proposed changes to the protocol or investigators.
- Immediate report of serious or unexpected adverse effects on participants.
- Immediate report of unforeseen events that might affect the continued acceptability of the project.

If you have any queries regarding the HREC review process or your ongoing approval please contact the Ethics Unit on 4221 3386 or email rso-ethics@uow.edu.au.

Yours sincerely,

Emma Barkus
Associate Professor Emma Barkus,
Chair, UOW & ISLHD Social Sciences Human Research Ethics Committee

Appendix C: Participant Information Sheet

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Participant Information Sheet

Project Title:
Carpooling Cultures: Learning from University Students on-the-move (HREC ref number: 2020/155)

Investigators:
Jacqueline Horton, School of Geography and Sustainable Communities, University of Wollongong (jh761@uowmail.edu.au)

Dr. Nicole Cook, School of Geography and Sustainable Communities, University of Wollongong (ncook@uowmail.edu.au)

Professor Gordon Waitt, School of Geography and Sustainable Communities, University of Wollongong (gwaitt@uow.edu.au)

This is an invitation to participate in this research project of which your participation is completely voluntary.

What you will be asked to do:
The project involves participating in;

(i) Optional pre-interview activities
- These should take no more than 30 minutes to complete and will be used in discussion during the interview
- Includes:
  - Sketching meanings and journeys
  - Indicating routines and weekly transport choices
- You will be provided with these activities once you have indicated you wish to participate and should be emailed back to the researcher before the interview commences

(ii) Video recorded online interview to share your experiences and meanings about carpooling.
- This interview will occur via WebEx or Zoom and will last approximately 30-40 minutes
- Interview topics include
  - Aspirations about the car including, memories of obtaining license, first driving experiences etc.
  - Your commute to university and transport mode preferences
  - Experiences of carpooling including, who you carpool with, types of sharing, what occurs during the carpooling trip

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- Insights into carpooling at UOW, final comments
- The video recording will only be viewed by the research team

Your Participation

It is important to know that your participation in this project is voluntary. During the project, you will be asked to provide your consent for the initial interview. You may withdraw your consent to participate at any time. If you change your mind at any time, any information you have provided to the project may also be withdrawn at your request prior to June 2020. Withdrawal from the project will not have any consequence to you, nor will it affect your relationship with the University of Wollongong.

Privacy and Confidentiality

Maintaining participant privacy and confidentiality is a priority for this project. Privacy is ensured through the use of a pseudonym within audio transcripts of interviews. Your name will not be used in the project unless you wish to be identified. A copy of all transcripts, audio-recording and video-recording will be provided to you with the opportunity for you to make any edits.

All information and data will be stored securely by the University of Wollongong, with access permitted only to the researchers on this project.

Potential Risks

Aside from giving up your time, we do not expect that there will be any risks associated with taking part in this study. You will not be pressured to answer any questions that might make you feel uncomfortable, and you are free to terminate the conversation at any time. You also have license to withdraw any or all information you have provided up until June 2020.

Benefits of the research

Should you choose to participate in this project you will be contributing the filling a knowledge gap within both boarder research surrounding carpooling research and sustainable mobility. This evidence-base will also contribute to potential future planning and policy making to enhance carpooling within UOW.

Further, this research underpins an Honours thesis. This thesis may be published in academic journal articles, books, and conference papers.

Ethics approval and contact

This research project is approved by the University of Wollongong Australia Human Research Ethics Committee. If you have concerns or complaints regarding this project you can contact the UOW Ethics Officer, Human Research Ethics Committee (HREC),

University of Wollongong at rso-ethics@uow.edu.au. This HREC reference number for this project is 2020/155

What to do if you wish to get involved:
If you are willing to participate I this study, please contact Jacqueline Horton at the University of Wollongong via email (jh761@uowmail.edu.au) or phone (0457 526 827)

Further Questions:
If you have any concerns or questions regarding this project please contact Nicole Cook (ncook@uow.edu.au).

Thank you for your interest in this study.

Appendix D: Consent from

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Participant Consent Form—Stage 1 Semi-Structured Interview

PROJECT TITLE
Carpooling Cultures: Learning from University Students on-the-move

INVESTIGATORS:

Jacqueline Horton (Honours Student), School of Geography and Sustainable Communities, University of Wollongong (jh761@uowmail.edu.au; 0457526827)

Dr. Nicole Cook (Supervisor), School of Geography and Sustainable Communities, University of Wollongong. (ncook@uow.edu.au)

Professor Gordon Waitt (Supervisor), School of Geography and Sustainable Communities, University of Wollongong (gwaitt@uow.edu.au; 02 4221 3684)

I have been provided with an information sheet about the honours research project: *'Carpooling Cultures: Learning from University Students on-the-move'*, and I have discussed the study with Jacqueline Horton who is conducting this research as part of an Honours thesis in the School of Geography and Sustainable Community, Faculty of Social Sciences, University of Wollongong.

I understand that, if I consent to participate in Stage 1 of the project, I will be involved in an online interview of approximately 60 minutes, which will be audio-recorded and transcribed.

I understand that my research participation is voluntary, and I am free to withdraw from the study at any time. If I decide not to participate or withdraw my consent, this will not affect my relationship with the University of Wollongong.

I understand that I can receive a copy of the audio-recording of my interview. I will then have a period of four weeks during which I can choose to withdraw information that I have I have contributed to the project up until the end of June 1, 2020 by contacting Jacqueline Horton.

Should I have further questions about the study, I can contact Nicole Cook (ncook@uow.edu.au)

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If I have any concerns or complaints regarding the way the research is or has been conducted, I can contact the Ethics Officer, Human Research Ethics Committee, Office of Research, University of Wollongong on (02) 4298 1331 or email rso-ethics@uow.edu.au

By signing below I am indicating my consent to (please tick the activities you agree to participate in):

☐ Participate in an interview via WebEx or Zoom

☐ Have a video-recording of the interview made for transcription

☐ Request for my name to be replaced in the study by a pseudonym

☐ (Optional) Agree to complete the 'before the interview' documents

By signing below, I consent to participate. It has been explained to me that the data collected from my participation will be used for an honours thesis and may be published in scholarly publications (i.e. journals, book chapters, www.theconversation.com.au). I consent for the data I provide to be used in these ways.

Signed Dated

……. …../……./……..

Name (please print)

……

Appendix E: Table of strategies to maintain rigour (Adapted from Baxter and Elyes (1997) Table II pp. 512)

	Criteria			
Strategy	**Credibility:** Authenticity of the data	**Transferability:** Generate data that can fit within research settings outside the context of this study	**Dependability**: Minimise researchers influence on the project and the data generated	**Confirmability:** Acknowledge the role of the researcher in relation to the interpretation of data
Literature review	✓	✓		
Multiple recruitment methods	✓			
Interview schedule		✓	✓	
Ethical considerations including the use of consent forms, information sheets, and formal ethics approval	✓			
Audio recording of interviews		✓	✓	
Verbatim transcription of interviews		✓	✓	
Personal research diary				✓
Positionality statements				✓
Multiple layer analysis			✓	
Peer debriefing and examination: weekly supervision meetings where feedback was provided on all stages	✓		✓	

Appendix F: Recruitment Email Script

Email Title: Invitation, Honours Research and Sharing Carpooling Experiences

Email Script

Dear student,

Last year you participated in a survey developed by the University of Wollongong Environment Unit and the School of Geography and Sustainable Communities titled 'Jump on Board'. The survey asked a range of questions regarding your journey to university, with a focus on carpooling.
I am contacting you today because at the end of the survey you indicated that you would consent to being contacted regarding future research on this topic.

I am a current UOW honours student in the School of Geography and Sustainable Communities working in collaboration with the Environment Unit on the second phase of the carpooling research. The second phase explores university students' experiences of carpooling through online interviews.

Please note, in phase two we are only interested in seeking the experiences of **DRIVERS** who share their car with others.

If you agree to participate, the interview would occur on either WebEx or Zoom—you may indicate if you have a preference in your reply to this email. During the interview you will be asked questions regarding your experience of carpooling, who you share the car with and what kind of sharing practices occur during your journey to campus.

Before the interview, I will provide you with some 'pre-interview' activities which will help reflect on your journey to campus. You do not have to complete them before the interview if you do not wish to. We will draw upon these activities during the interview and an opportunity will be given to complete the during the interview if necessary.

Attached to this email is a Participant Information Sheet which further details the project. If you agree to participate you will be provided with a Consent Form and the interview questions so that you can reflect upon them before we conduct the interview. I will provide you with dates and times for the interview for you to select the most convenient; if no option suits, please reply with a time that would.

Thank you for you time. I look forward to hearing from you.

Wishing you well,
Jacqueline Horton

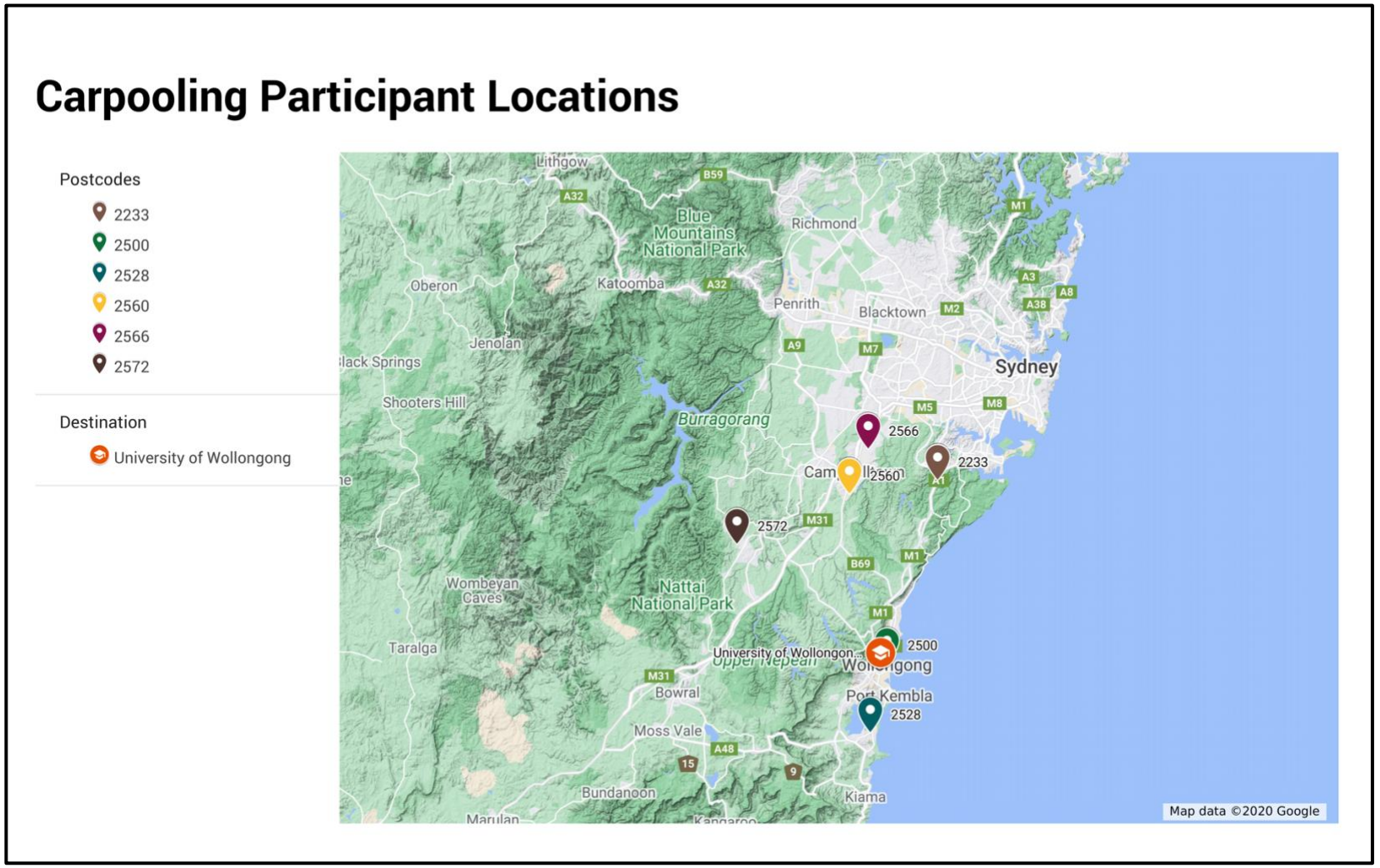
Appendix G: Media Script for Recruitment

Social Media Script

Honour Research and Sharing Carpooling Experiences

Do you have experiences of carpooling to the University of Wollongong campus?
Jacqui is an honours student. Her honours project is to understand better the experience of students who carpool to the University of Wollongong campus. If you would like to share your stories of carpooling with Jacqui please contact her via email (jh761@uowmail.edu.au).

Appendix H: Map of Participant Postcodes



Appendix I: Semi-structured interview

Semi-structured interview: carpooling at university

Aspirations of the car

Thank you for agreeing to participate in this research. I'd like learn more about how you connect to your car.

So, I'd like to take a step back and look at when you first got a car or your licence and what that meant to you.

Prompts: For example, some people discuss a sense of freedom or a sense of responsibility. What would you say about those initial driving experiences?

Secondly, I'd like you to tell me a little about how you came to own or possess your car? Was it a gift, did you buy it, was it handed down?

Can you tell me a little about the feelings the car evokes for you? Can you recall moments of happiness when in the car, or relief perhaps? Or do you find driving a chore?

Has your attachment to the car changed from those initial experiences when you first began to drive? Do you feel differently when driving?

If you could no longer drive, or you did not have a car to drive, how would you negotiate that experience? What would be your response?

What if these experiences of not being about to drive were long-term, for example, what if due to the current context of coronavirus there was a block on driving and restricted mobility? How would you be able to negotiate the world and your daily life in that context?

The commute

In this section of the interview, I am going to ask you a little more about your commute. So to start with, could you tell me where you live?

And how long is that commute to university?

What mode of transport do you most commonly use? It can be carpooling or a completely different mode. Let's use this table to jot down what modes you use and when you use them.

Is this your preference for travel to university? Or would you prefer to travel differently?

Thank you for those answers, I'd now like you to sketch for me your commute to campus.

Why you carpool

So moving from your experiences. Let's look at some of the reasons behind why you choose to carpool and why you choose to share your space within the car.

I'd like you to have a think about some of these reasons without me prompting you. Please take your time. I can prompt you if you're stuck.

Now I'd like you to fill out this sheet which asks you about the importance of different factors on participation that are suggested by current literature. I'd like to ask you some questions about the areas you find significant and insignificant.

- Prompts:
    - Finance: how does your broader financial situation play into your decision to carpool week to week?
    - Comfort
    - Convenience
    - Sustainability

Experiences of carpooling

So, just to give you a little insight into why I am interested in understanding your carpooling experiences. Basically, the literature tells us that the car is a private and intimate space so I'm interested in learning about your experiences of sharing what is deemed a private space. Does this idea of the car being private and intimate resonate with you in any way?

So to begin with, can you tell me a little about the people you carpool with?

When you carpool, what types of sharing occur within the car?
For example, who controls the music? Is it played out loud or is it silent in the car?
Do you share the cost of petrol for the trip?
How do you negotiate different timetables? Do you expect people to wait for you or to come earlier to match with others timetables? How does this play out with each passenger?

Next, thinking about the car as a private space, how do the smells of the car impact your journey? We know that cars have distinct smells depending on whether they're leather or whether the owner cleans the car or has an air freshener? Does this impact your experience at all?

Keeping with the ideas of smells, how do the smells of other people in the car impact your journey? Do you have issues with body odour or strong perfume?

Do you find the proximity of people in the car to be comforting or uncomfortable?
Does this change depending on how well you know your other passengers?

How about the conversations that occur in the car during your carpooling journey? What kinds of things are discussed?

- Mundane
- Personal
- A catch up
- A debrief

Let's look at your past experiences of carpooling? Do you have any experiences that stand out as either positive or negative?
Specifically I'm interested in turning point during carpooling that either have made you want to continue carpooling or have caused you to question carpooling as a mode for you.

Finally, what does carpooling allow you to achieve?

Insights into carpooling—suggestions, final comments
Finally, I'd like to provide you with a platform and some time to discuss anything else you'd like to add to our chat?

Also, I'd like to invite you to discuss any improvement suggestions you might have for carpooling on campus?

Do you have any suggestions for improvements to how people can connect to carpooling?

Finally, can you tell me what year you were born in?
Your postcode?
And what your living situation is? Do you live alone, in a share house or with parents?

Appendix J: Interview Activities Booklet

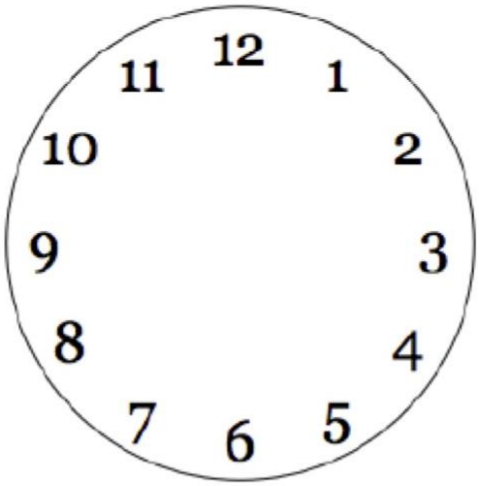
BEFORE THE INTERVIEW

Please sketch what carpooling means to you

Please sketch what your journey to campus looks like

In this activity I am interested in learning more about how the carpooling fits into the different activities you complete in a usual day your drive to campus with other students.

Think of the clock face as a pie-chart.
Indicate the times on the clock face that usually start and finish a particular activity.
Then block out the times you begin and finish each activity.
Perhaps starting with the times that when you start and stop carpooling.
Please include a range of activities - such as sleeping, eating, working, socialising.



Reasons for Carpooling

Please indicate on the scales below each option how significantly they impact your participation in carpooling. With 1 being insignificant, and 5 being highly significant.

Finance

1 **2** **3** **4** **5**

Comfort

1 **2** **3** **4** **5**

Convenience

1 **2** **3** **4** **5**

Sustainability/Environmental reasons

1 **2** **3** **4** **5**

Socialising

1 **2** **3** **4** **5**

Day of the week	Transport Mode	Travel with others
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		